The Relationship Between Perceptual Characteristics and Effective Teaching at the Junior College Level

By

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A DISSERTATION PRESENTED TO THE GRADUATE COUNCIL OF THE UNIVERSITY OF FLORIDA IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF DOCTOR OF EDUCATION

UNIVERSITY OF FLORIDA
1972

ACKNOWLEDGMENTS

The writer wishes to express his gratitude to the many persons whose assistance and encouragement made possible the completion of this study. Sincere appreciation is extended to:

Dr. Arthur W. Combs, Chairman of the writer's supervisory committee, for his insightful comments and continued support.

The other members of the writer's supervisory committee, Dr. Vynce A. Hines, Dr. William W. Purkey, and Dr. Marvin E. Shaw for their advice and assistance.

Dr. Robert R. Wiegman who had to withdraw from the writer's supervisory committee.

Dr. William Ware for his assistance in computer programming, and Dr. John M. Newell for his editorial suggestions.

Dr. Hannelore Wass, Dr. Donald Dellow, and Miss Penny Hiers for their willingness to act as judges.

The administration and instructors at St. Johns River Junior College whose consent made the study possible.

The writer's mother, Isabelle, for her unwavering faith.

And finally, the writer's wife, Phyllis, whose love, patience, and understanding provided the support for such an endeavor.

TABLE OF CONTENTS

LIST OF TABLES

Abstract of Dissertation Presented to the
Graduate Council of the University of Florida in Partial Fulfillment
of the Requirements for the Degree of Doctor of Education

THE RELATIONSHIP BETWEEN PERCEPTUAL CHARACTERISTICS
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March, 1972

Chairman: Dr. Arthur W. Combs
Major Department: Educational Foundations

The Problem

Much of the research dealing with the identification of effective teachers has proceeded on the assumption that the essential variables for study are the external correlates of teacher behavior. However, there are still no objective criteria on the basis of which we can make clear distinctions between good and poor teachers. A small number of studies have employed the internal or perceptual frame of reference and have reported promising findings. Therefore, this research sought to explore the relationship between the perceptual organization of junior college instructors and student ratings of their effectiveness as teachers.

Procedure and Hypothesis

The subjects in this study were 32 junior college instructors. Two kinds of data were number-coded -- to preserve instructor anonymity -- and collected as follows:

1. The teacher effectiveness data were measured with student ratings of each teacher on a self-anchoring scale (Teacher Rating Scale) and the Purdue Instructor Performance Indicator.

2. The perceptual data were inferred by four trained judges from three human relations incident reports and written essays to five TAT cards.

The statistical analyses included the computation of multiple stepwise regression correlations between perceptual data and effectiveness ratings and intercorrelation coefficients within the six perceptual dimensions as inferred from TAT and HRI protocols.

It was hypothesized that there would be a significant positive relationship between student ratings of instructor effectiveness and certain aspects of instructor perceptual organization. The more effective instructor would typically perceive in the manner described by the first word/phrase of the bipolar perceptual continua, and that the less effective instructor would perceive in the manner described by the second word/phrase of the bipolar perceptual continua.

A. General Perceptual Frame of Reference
   1. Internal-External frame of reference

B. Teacher's Perceptions of Other People
   1. Able-Unable
   2. Worthy-Unworthy

C. Teacher's Perceptions of Himself
   1. With people-Apart from people
   2. Adequate-Inadequate

D. Teacher's Perceptions of the Helping Relationship
   1. Freeing-Controlling

Results

The statistical analyses of the relationship between the inferred perceptual dimensions and student ratings of instructor effectiveness revealed that:

1. When multiple stepwise regression correlations were computed between perceptual data as inferred from TAT protocols and student ratings as represented by PIPI scores, the following four perceptual dimensions produced a multiple R of .70 and accounted for 49 percent of the total variation found in the criterion:

    a. Teacher's perceptions of the helping relationship as freeing rather than controlling

    b. Teacher's perceptions of others as able rather than unable

    c. Teacher's perceptions of self as adequate rather than inadequate

    d. Teacher's perceptions of others as worthy rather than unworthy.

2. When multiple stepwise regression correlations were computed between perceptual data as inferred from TAT protocols and student ratings as represented by TRS scores, the following four perceptual dimensions produced a multiple R of .70 and accounted for 49 percent of the total variation found in the criterion:

    a. Teacher's perceptions of the helping relationship as freeing rather than controlling

    b. Teacher's perceptions of others as able rather than unable

c. Teacher's perceptions of self as adequate rather than inadequate

d. Teacher's general frame of reference as internal rather than external.

3. There was a positive and significant relationship (.77) between the two measures of student ratings.

4. The interrelationship within the six perceptual dimensions as inferred from TAT and HRI protocols was holistic.

General Conclusion

An overview of the investigation suggested the following conclusion:

1. Five of the six perceptual dimensions demonstrate high predictive power when multiple stepwise regression correlations were computed between perceptual data and student ratings of instructor effectiveness.

The implications of this research for effective teaching at the junior college level and training and selection of junior college instructors were also discussed.

2. Instructor perceptual organization may be inferred from human relations incident reports and written essays to TAT cards with a high degree of inter-rater reliability.

3. Intercorrelation coefficients within the six perceptual dimensions suggest a common factor.

The implications of this research for effective teaching at the junior college level and training and selection of junior college instructors were also discussed.

CHAPTER I

PROBLEM AND PURPOSE OF THE STUDY

Introduction

The community junior college is the most rapidly growing and perhaps the most dynamic unit in American education. The Carnegie Commission (1970) reported that in 1960 there were 600,000 students enrolled in junior colleges, in 1969 almost two million, and the projected enrollment figure in 1980 is four million students. The community junior college represents the American dream of an open door college. It came into existence because the traditional college and university could not meet the needs of a greater variety of students. The community junior college embodies the belief that all high school graduates and otherwise qualified individuals should have access to higher education.

The philosophy of the community junior college rests on the assumption that the United States is an open society in which every person can aspire to and have some reasonable degree of hope of achieving additional educational training and opportunity. The student body is supposed to be representative of the total population: all social classes, all interests, all ability levels, and all ages. In a dramatic way, the

community junior college affords a second chance to those individuals who have previously experienced limited success or few opportunities in the area of education. The prospect of salvaging valuable human resources makes the community junior college a challenging and exciting educational institution.

The distinct challenge of teaching at the junior college level is one of meeting the needs of a wide, diverse student body. The structure of the community junior college represents a comprehensive curriculum which includes transfer programs, general education programs, remedial courses, occupational programs, continuing education, and community enrichment programs. The challenge rests with meeting the needs of professional-preparatory students as well as vocational students, high ability students as well as low achievers, young adolescents as well as students in their forties and fifties, students seeking transfer credits as well as adults searching for personal enrichment.

Pedagogical objectives and instructional styles which have traditionally been associated with higher education may not be relevant in a junior college setting. The whole notion of the variables associated with effective teaching needs to be reexamined and restated when objectives are interpreted in the light of the complex and comprehensive purposes of the community junior college.

Effective Teaching

The United States Office of Education estimated that in the mid-1970s for the first time on a large scale, many more teachers will be available for service than the schools will be able to accommodate (Allen and Mackin, 1970). As a result, teacher needs which have previously been measured almost solely in terms of the number of teachers required will begin to be determined by the prospective teacher's professional effectiveness. This accentuates the persistent problem confronting educators of identifying what is good teaching, and the concomitant challenge of determining the variables which are significant in the preparation of effective teachers.

The problem of arriving at universally applicable criteria of what constitutes a good or bad teacher has thus far eluded consensus. However, Priest (1967) has stated that teaching is too important to be exempt from measurement. He emphasized that our admission that we cannot differentiate between good and poor teaching is an admission that we are hopelessly confused. Hamachek has made the following observation:

> It is, I think, a sad commentary about our educational system that it keeps announcing publicly and privately that good and poor teachers cannot be distinguished one from the other. Probably no issue in education has been so voluminously researched as has teacher effectiveness and conditions which enhance or restrict this effectiveness. Nonetheless, we still read that we cannot tell the good guys from the bad guys (1969, p. 341).

Much of the research dealing with the identification of effective teachers has proceeded on the assumption that the essential variables for study are the external correlates of teacher behavior. Consequently, competent and incompetent teaching have been distinguished on the basis of overt behavioral traits. The emphasis of what the teacher does or says has led to the frequent examination of teacher methods or traits. In this approach observations of the teacher are made from the point of view of an outside observer, someone looking on at the process. This external approach to the study of effective teaching has assumed that observation and quantification of classroom behavior are the true measures of effective teaching. The observation and measurement focus on the relationship between patterns of the teacher's classroom behavior and the corresponding changes in pupil behavior.

The study of good and poor teaching on the basis of methods or traits has met with disappointing results. There are still no objective criteria with which we can make clear distinctions between good and poor teachers. Barr (1961) reviewed 83 doctoral dissertations dealing with effective teaching and found that the good teacher cannot be separated from the bad teacher in terms of specific teacher behavior. In a study sponsored by the National Education Association, Ellena, Stevenson, and Webb (1961) reviewed all the research available on good and poor teaching. They reported that there is no specific trait or method exclusively associated with good teaching. Hamachek (1968) concluded

that cookbook formulae to effective teaching fail because what is important for one student is not important to another. The adjective "outstanding," according to Zax (1971), is meaningless when considered out of context. For example, the person who is rated as the best of one group of teachers may be rated as being much less than best when considered in relation to another group of teachers. The image of the teacher, according to Getzels and Jackson (1960), has undergone significant change so that many images of the good teacher exist today. It would seem that there is no one best kind of teacher because there is no one kind of student; methods which facilitate some students might be detrimental to the achievement of others.

An alternative way of identifying effective teaching is based on the theoretical position of Arthur W. Combs and his colleagues which emphasizes the internal or phenomenological point of view. This approach focuses on the perceptual organization of the teacher as a significant means of studying effective teaching.

Perceptual Approach

The basic assumption of perceptual psychology states that, "All behavior, without exception, is completely determined by, and pertinent to, the perceptual field of the behaving organism" (Combs and Snygg, 1959, p. 20). The perceptual field may be viewed as the individual's unique perceptions of himself and the world in which he lives. According to Combs, Avila, and Purkey:

> The individual's behavior is a function of all those perceptions existing for him at a given moment. The word "perception" is used by psychologists in this persuasion to mean more than "seeing." It refers to "meaning," the peculiar significance of an event for the person experiencing it. In this sense, the behavior of a person at any moment is understood as the direct consequence of the field of meanings existing for him at that instant (1971, p. 25).

Thus, it is not the external facts which are important in understanding behavior, but rather the meaning of these facts to the behaver. People, then, behave according to how things seem to them.

Not all the perceptions existing for an individual are of equal value to him at any particular time. As a consequence of experience, some perceptions have greater relevance and significance for the individual. The most important of these perceptions are the perceptions a person has about himself. Some beliefs about oneself are superficial and remain on the periphery of the perceptual field. Others will be more central and assume the character of a belief. Combs has said, "Whatever their origin, beliefs, once established, tend to have an organizing effect upon further perception and so upon the behavior exhibited by an individual" (1969, p. 13). This selective effect on perception gives stability and predictability to behavior. Thus, to effectively explore the dynamic bases of effective teaching, one must explore these highly meaningful perceptions.

In 1959, at the University of Florida, a special seminar of faculty and graduate students met to explore the notion that "helpers"

can be distinguished from "non-helpers" with regard to their characteristic ways of perceiving. The basic assumption was that "...persons who have learned to use themselves as effective instruments in the production of helping relationships can be distinguished from those who are ineffective on the basis of their characteristic perceptual organizations" (Combs, 1961, p. 56). A discussion of the perceptual dimensions generated from this seminar will be discussed more fully in Chapter II.

Since the 1959 seminar, several research studies have investigated the perceptual organization of public school teachers, counselors, Episcopal priests, and college professors. These studies have reported significant correlations between certain perceptual dimensions and criterion measures of effectiveness. These criterion measures have included principal and curriculum coordinator ratings, college faculty member ratings, ratings by Episcopal Bishops, student ratings, and National finalists in the Jaycee Outstanding Young Educator Contest (Macomber, 1961; Combs and Soper, 1963b; Gooding, 1964; Benton, 1964; Usher, 1966; Vonk, 1970; Brown, 1970; and Dellow, 1971).

Purpose of the Study

This investigation employed the internal approach to teacher effectiveness and examined the relationship between selected perceptions of junior college instructors and student ratings of teacher effectiveness. This study was an extension of the ongoing work at the University of Florida regarding the nature of the perceptual organization of effective

teachers. Previous studies have investigated public school teachers (Gooding, 1964; Brown, 1970; Vonk, 1970; and Dellow, 1971) and university professors (Usher, 1966). Since the community junior college has become a dynamic unit in American education, it was felt that research in the area of perceptual psychology should also study the perceptual organization of junior college instructors.

It was determined that student evaluations would represent the criterion of effective teaching. Previous studies by Usher (1966) and Vonk (1970) found significant correlations between the perceptual organization of teachers and student ratings of teacher effectiveness.

The questions posed by this study were: (1) What was the relationship between perceptual organization of junior college instructors and student evaluations of effective teaching? (2) What relationship existed between each of the perceptual dimensions used to assess perceptual organization? (3) What relationship existed between the two student evaluation instruments? (4) What relationship existed between the perceptual ratings as inferred from TAT and HRI protocols?

CHAPTER II

REVIEW OF THE LITERATURE

This chapter will review: (1) differing definitions of the criteria of effective teaching, (2) research on college teaching, (3) research on student ratings of teachers, (4) teacher effectiveness studies pertaining to personal characteristics and interaction analysis, (5) studies regarding the helping professions, and (6) studies conducted in the area of perceptual psychology.

Criteria of Effective Teaching

In determining the factors that are significantly related to success in teaching, it must first be possible to specify some criteria through which effectiveness may be defined. Rabinowitz and Travers (1953) have stated that the term "effective teacher" is only an abstraction; no teacher is more effective than another except as someone so designates. A criterion thus becomes a matter of decision; it rests on consensus. This means that effectiveness as an attribute does not inhere in teaching but is imposed upon it from without. Ultimately, criteria are value judgments about what are worthwhile consequences. To establish ultimate criteria of teacher effectiveness one must first do so on the basis of the purpose chosen for education; effectiveness can then be judged in terms of how

well the teacher facilitates the achievement of these goals. Thus, the search for criteria must begin with the definition of one's basic philosophy of education.

Dixon and Morse (1961) emphasized that there does not appear to be any constant criterion in appraising teaching. The fundamental fact is that opinions differ on what is good teaching and what is poor teaching. Judges and raters tend to differ in educational philosophy and, as a result, the same teacher might objectively be good in one context and poor in another. McKeachie (1964) has added that arriving at an overall index of teaching effectiveness is complicated by the probability that a teacher who is effective in achieving one course objective is not necessarily effective in achieving others. And Shoben (1967) has cautioned that the assessment of the teacher's performance must be attentive to such matters as the clarity with which goals are initially outlined. For example, a rating scale which reliably and validly appraises lecturing is probably quite irrelevant to a course in which the primary goal is increased skill in critical thinking.

However, Ryans (1949) has emphasized that until we are able to establish adequate criteria of teaching competency, the whole system of teacher training, appointments, promotions, and tenure is on shaky ground. Ryans delineated two general empirical approaches to the criterion problem in education. The first is through observation of the teacher, and the second through observation of the product of the teacher's efforts, the pupils.

An observational system is any systematic technique for identifying, classifying, and quantifying specific teaching activities. Bond (1970) has remarked that interaction analysis is primarily concerned with verbal behavior -- since most of the functions associated with classroom teaching are implemented by verbal behavior. A different point of view is expressed by Symonds (1955). It has been his conviction that the effective or ineffective teacher cannot be defined in terms of behavior. Symonds believed that the basic determinants are to be found in the personality structure of the teacher rather than in outward behavior.

Other educators have felt that the basic criterion of teacher effectiveness should be pupil change. Rabinowitz and Travers (1953) stated that education is designed to develop in the pupil certain knowledges, skills, attitudes, and appreciations, most of which the pupil could not be expected to acquire at any great extent without benefit of formal education.

However, using pupil change as the criterion of teacher effectiveness presents some difficulties. Although some educators purport to base effective pupil change on the basis of achievement tests, there is ample reason to assume that there may be long-range consequences which are not immediately measurable. There is also the possibility that growth which is immediately measurable will rapidly disappear.

Ryans (1949) has cautioned that care must be taken to adequately sample the entire range of pupil behavior such as knowledge and

understanding, attitudes, and personal adjustment. According to Symonds (1955), achievement tests measure only a small portion of the changes that we expect. Outcomes such as attitudes toward learning and attitudes toward teaching are rarely measured. In terms of using grade point average, Gustad (1967) has stated that grades tell us approximately as much about a student's development as an IQ score does about his intellectual status. In other words, a student's grade may be measuring test sophistication and brightness rather than his growth in terms of course content. Postman and Weingartner (1969) have gone even further in condemning examinations as suitable criteria. They have said that since meanings are in people, standardized examinations denigrate the uniqueness of each learner's perceptions.

Student evaluations are offered as valid criteria since, as Kent (1967) has explained, opinions of students who are directly involved in the learning situation might be one of the primary sources determining effective teaching. It is the student who is in the best position to evaluate when he is beginning to integrate the process of learning with the problems he continually confronts in life; students are the only direct observers, they know best whether or not they have learned. It would be logical to say that students have certain vested interests in what goes on in the classroom. Naturally they are biased in favor of exciting lectures, enthusiastic teachers, and stimulating discussions. No group would be impartial. It would seem the success of a teacher should be

the result of the interaction with students of many interests, abilities, and dispositions.

Research on College Teaching

There is still a general uneasiness among college instructors regarding investigation of effective teaching. However, many educators have pointed out that dissatisfaction with teaching is part of the current student unrest. The more general complaints are with such matters as the practice of lecturing, the attitude of the lecturer, and the irrelevance and dullness of class presentations. The fact that the American Association of University Professors and the Association of American Colleges have joined forces on a two-year project to improve college teaching indicates that there is obviously something wrong with the existing conditions. College students have taken the initiative to publish course evaluation guides indicating that students do recognize good and poor teaching, and that large numbers of students can agree upon the effectiveness of an individual teacher. The Project to Improve College Teaching, sponsored by the AAUP and AAC, feels that evaluation is but a means toward recognizing and rewarding teaching effectiveness. Instructor evaluation can thus become one of the strongest forces for self-development of the new teacher and self-renewal for the established teacher.

McKeachie (1963) has emphasized that when one evaluates college instruction, it is necessary to consider not only the accumulation

of knowledge but also the development of problem-solving skills and desirable traits. When one considers the goals of higher education, it is important to note that they include attitudinal and emotional changes as well as the more obvious cognitive goals such as critical thinking and broad knowledge. In comparing the lecture method versus the discussion method, McKeachie stated that the lecture is superior in acquiring knowledge of information while discussion techniques are superior in developing concepts and problem-solving skills. Cartter (1967) added that since students can read and books are so numerous, lectures are no longer necessary. He felt that using instructors as "talking books" tended to keep the student a permanent adolescent. Cartter suggested more student independent study which would release faculty time for more seminars and tutorials.

Johnson (1967) offered a view of education from the consumer's viewpoint. Johnson proposed that faculty and students sit down and talk about the teacher-learner process, not just in student-faculty committees but in conjunction with every course.

In an interesting study, Doty (1967) examined three teaching methods -- (1) conventional lecture-discussion, (2) small group discussion, and (3) tape-recorded lecture -- with 300 undergraduate students in an introductory psychology course. The variables used for students were grade point average, achievement-motivation, creativity, and social needs. Doty found in general that teaching method effectiveness varied

as a function of student personality characteristics. In particular she made the following conclusions:

1. Students characterized by high creativity or by high social needs tended to perform best in small discussion groups.

2. Students characterized by low social needs, moderate achievement need, and low in creativity performed best under taped-lecture.

3. Students characterized by moderate achievement and social needs, and low creativity performed best in the conventional lecture situation.

4. Students characterized by high GPA and achievement need performed well in all the instructional methods explored (Doty, 1967, p. 364).

Doty's findings seem to indicate that bright, highly motivated students can learn under a variety of teaching methods; however, with a large number of students the teaching method employed appears to make a significant difference.

Stern (1963) reviewed studies in college classes comparing nondirective with directive instructors with reference to two types of learning outcomes: (1) gain in cognitive knowledge and understanding, and (2) attitude change toward self and others. Stern found that nondirective teachers facilitated greater changes in both cognitive knowledge and attitudes about self and others. In a study at Hofstra University, Hoffman (1963) found that students seem to appreciate most of all the teacher's attitudes toward the student. Students are most concerned

with the professor's readiness to give advice, his patience in answering questions, and his ability to create a comfortable classroom climate.

DeBruin (1967) developed a rating instrument in which graduate students were asked to check his overall teaching ability and then check specific aspects of self concept. DeBruin found two qualities which correlated highest with teaching effectiveness: (1) the use of self as an effective instrument and (2) sensitivity to the needs of students. In a study of student opinion of college teaching, Mosello and Rusch (1968) found that the three most important factors associated with effective teaching were enthusiasm and interest in subject matter, friendly and helpful attitudes toward students, and effective use of questions. Doyle (1969) found in a study of college teaching effectiveness at Colorado State College that teachers rated most effective by student ratings, colleagues' ratings, and administrators' ratings had the following characteristics: (1) positive view of self, (2) wide feelings of identification with others, (3) openness to experience and acceptance of self, and (4) rich and available perceptions in their subject area.

It is apparent from these studies that college instructors who are sensitive to the needs of their students and enthusiastic about their subject matter area are rated most effective by their students. It also appears that students in evaluating teacher effectiveness are concerned with more than just the presentation of information. The apathetic professor may find himself getting closely involved with students who will

insist on more informal contacts with their teachers outside the classroom. Recent evidence suggests that students will be evaluating teachers just as teachers have been evaluating students.

Research on Student Ratings of Teachers

The chief bone of contention between those for and against the use of student ratings is the question of validity; that is, are student ratings an accurate and appropriate measure of teacher effectiveness? Kent has evaluated the arguments against student evaluations:

> First, much of the opposition to student ratings seems to be motivated by a deep-seated and pervasive distrust of the student. He is seen as an incompetent judge, biased, immature, and arbitrary. He is charged with confusing good teaching with showmanship and with construing evaluation as an open invitation to exact retribution, to get back at the instructor for the grade he received.
>
> These criticisms may be justified by the attitudes and responses of some students, but to jump to the conclusion that all, or even most, students are incompetent, gullible, or vicious is to fall wide of the mark. Those who have seriously examined the question of student ratings seem to agree that they have some value. Students are perceptive and become more so when they realize that their opinions are seriously guarded (1967, p. 337).

Slobin and Nichols (1969) added that many professors fear that student ratings are invalid measures of subtle aspects of teaching effectiveness, revealing only the "halo effect" of the instructor's personality or showmanship. They concluded that this is true only if rating forms are poorly constructed.

Paraskevopoulos (1968) investigated the question of how students rate their teacher. He made the point clear that student ratings allow us to see how pupils perceive and interpret the behavior of their teacher. This personal subjective perception, more than the independent and objectively assessed behavior by trained observers, determines essentially the interpersonal relationships so crucially important in its effect on a student's learning. Rayder (1968) was concerned with the students' discontent with instruction at the college level. He sought to study variables which were believed to have some relationship to student ratings. Rayder's study confirmed that student ratings are not influenced even by variables such as grades previously earned from the instructor being rated. It appears that since student ratings were found to be relatively unbiased, more confidence would be placed in results of how certain instructor characteristics were reflected in student ratings.

Veldman and Peck (1969) stated that student ratings have the advantage of being based on a much more comprehensive sample of observed behavior than judgments of supervisors, principals, or trained observers. With student ratings there is much to be gained by averaging over the idiosyncratic biases of a large number of judgments. Veldman and Peck felt that student ratings provide a reliable description of typical behavior of the teacher based on many hours of classroom behavior.

Renner discussed student ratings from the point of view of junior college teaching:

> Despite their limitations, they (students) only have had an opportunity to participate fully in his teaching endeavors. They are the ultimate consumers of his efforts, are the only ones who know whether he has been effective or not.
>
> They are not trained judges of the suitability of the mentor's methods. But they do judge whether or not the course has value for them. Although their reactions are obviously not the only index of teacher competence, they appear to be the ones most sharply focused on teaching itself, both the content and the process (1967, p. 12).

It would appear that the student is in the best position to make assessments about effective teaching since he is continuously interacting with the teacher in and out of the classroom. Ratings by supervisors, principals, and trained observers, on the other hand, represent only a brief discrete sample of the teacher's behavior. And trained observers by virtue of the instrument they are using to classify behaviors have a predetermined set regarding the characteristics of good and poor teachers. Perhaps the best argument in favor of the validity of student evaluations is that the teacher's behavior does not have the same effect on all students. In other words, a teacher may be effective for only a handful of students. When all the students make evaluations, this rating tends to represent a wide cross-section of the teacher's effectiveness.

Personal Characteristics

Research subsumed under the category of personal characteristics deals with qualities generally associated with the teacher's per-

sonality. This research tends to suggest that personal qualities such as warmth, empathy, flexibility, and spontaneity produce greater changes in pupil behavior than specific methods or styles of teaching.

Witty (1947) sent a questionaire The Teacher Who Has Helped Me Most to 14,000 students in grades one through twelve. The rank order of student responses included the following twelve traits:

1. cooperative, democratic attitude
2. kindliness and consideration for the individual
3. patience
4. wide interests
5. pleasing personal appearance and manner
6. fairness and impartiality
7. sense of humor
8. good disposition and consistent behavior
9. interest in pupil's problem
10. unusual proficiency in teaching a particular subject (Witty, 1947, p. 350).

Witty concluded that if teachers wished effectively to influence students they should attempt to provide a classroom atmosphere in which success, security, understanding, moral support, and opportunity to attain worthy educational goals are all pervading.

In a study by Symonds (1955) 32 junior high school teachers were ranked by pupils and rated by the principal on a number of characteristics to determine teacher effectiveness. The 17 teachers on the top and bottom of the list were observed while teaching. Symonds then isolated these characteristics which distinguished good from poor teachers. The results indicated that the two extreme groups of teachers could be differentiated on three clear-cut bases: (1) superior teachers liked

children while inferior teachers did not, (2) superior teachers were personally more secure and self-assured than inferior teachers, and (3) superior teachers were better organized and had clearer goals of instruction than inferior teachers.

Cogan (1957) administered a paper and pencil test to 987 eighth grade students which contained three scales: (1) a scale assessing students' perceptions of their teachers, (2) a scale on which students reported how often they did required work, and (3) a scale on how often students did extra, nonrequired work. Cogan found a significant relationship between teachers described as warm and friendly and the amount of both required and nonrequired work students performed.

Washburne and Heil (1960) sought to determine what characteristics of teachers had a measurable effect on the intellectual, social, and emotional growth of students. The sample studied consisted of 54 elementary school teachers in grades 4, 5, and 6. At the beginning and end of the school year all students were given the Stanford Achievement test and the Ohio Social Acceptance Scale. The Otis Intelligence Test and an instrument called "Assessing Children's Feelings" were administered at the end of the school year. All teachers were rated by virtue of their scores on the Teacher Observation Scale, the Teacher Education Examination, and the Manifold Interest Schedule. The results indicated that there was no significant relation between either the Teacher Education Examination or the Teacher Observation Scale with regard to intel-

lectual, social, or emotional growth on the part of the students. However, the authors found that the teacher's personality had a clear and measurable effect on the progress of the students both academically and socially. Washburne and Heil concluded: "The results verified the major hypothesis of the study -- that different kinds of teachers get varying amounts of achievement from different kinds of students" (1960, p. 425).

Ryans (1960) conducted a series of studies in which the major objective was the identification and analysis of some of the patterns of classroom behavior, in particular, the attitudes, viewpoints, and intellectual and emotional qualities which characterize teachers. A factor analysis of classroom observation identified three behavioral dimensions: (1) friendly vs. aloof, (2) systematic vs. slipshod, and (3) stimulating vs. dull. An attempt was made to determine some of the distinguishing characteristics between a high group of teachers, one or more standard deviations above the mean on all three factors, and a low group of teachers, one or more standard deviations below the mean on all three factors. When the two groups were compared on a self-report inventory, there was a tendency for the high group to be characterized by: (1) extreme generosity in appraisals of others' behavior and motives, (2) enjoyment of pupil relations, (3) emotional adjustment, and (4) preference for nondirective classroom procedure. On the other hand, the low group tended to be characterized by: (1) critical appraisals of others, (2) preference

for activities which did not involve close personal contacts, (3) less favorable opinions of students, and (4) less satisfactory emotional adjustment (Ryans, 1960, p. 397-398).

The assumption that measurable personality traits of a teacher are important in the study of classroom interaction was studied by Bowers and Soar (1962). The research sample consisted of 54 elementary school teachers in two school systems in Tennessee. Data were collected from four attitude and personality inventories and a test of the cooperative group problem-solving skills of the pupils in each classroom. The observation instrument used was Medley and Mitzel's Revised Observation Schedule and Record (OScAR). Bowers and Soar concluded:

> Skillful interaction with pupils requires on the part of the teacher responsibility, and depth of affective relationship; it requires that she be well enough adjusted that much of her energy is not drained off in dealing with her own intrapersonal tensions; and she must be able to perceive herself and others clearly and represent herself honestly in communication with others (1962, p. 311).

Mason and Blumberg (1969) studied the teacher-student relationship regarding: (1) student perception of the quality of interpersonal relations in the classrooms in which they learned most, and (2) student perceptions of the quality of interpersonal relations in the classrooms in which they learned least. The major finding of the study was that students learned best in classrooms in which they: (1) perceived themselves as receiving regard, (2) perceived the teacher as under-

standing their feelings, and (3) perceived the teacher as consistent in what he says and does.

In an article which reviewed the implications of research regarding the importance of the teacher's personal characteristics, Hamachek said:

> Effective teachers appear to be those who are, shall we say, "human" in the fullest sense of the word. They have a sense of humor, are fair, empathetic, more democratic than autocratic, and apparently more able to relate easily and naturally to students on either a one-to-one or group basis. Their classrooms seem to reflect miniature enterprise operations in the sense that they are more open, spontaneous, and adaptable to change (1969, pp. 341-342).

Classroom Climate and Interaction Analysis

This approach to the question of effective teaching is more concerned with teacher behavior as it can be directly observed. Behavior is often fragmented and pieces of behavior are observed, measured, and quantified often by checklist or category method. The interaction approach attempts to enumerate behavior patterns which elicit particular student responses.

Mason (1970) has pointed out that the idea that factors other than those of a purely cognitive nature can materially affect learning has prompted many educational researchers to direct their attention to that portion of classroom dynamics which has come to be known as classroom climate. The findings of separate but mutually supportive studies on classroom climate suggest that distinct patterns of teacher behavior

or influence can be identified. Most researchers have adopted their own labels to describe these varieties of teacher behavior.

Anderson (1939) recorded the contacts which teachers had with kindergarten children in terms of dominative and integrative behavior. Anderson described domination as the behavior of a person who is inflexible, rigid, deterministic, a person who disregards the desires and judgments of others. The term integrative behavior was chosen by Anderson to designate behavior leading to a oneness or commonness of purpose among differences. Integration is the behavior of a flexible growing person who is looking for new meanings and greater understandings in his contacts with others.

Withall (1952) developed a technique for assessing the social-emotional climate in classrooms through a categorization of the teacher's statements. The instrument called the Social-Emotional Index is comprised of criteria whereby teacher-statements can be distributed among seven categories: (1) learner-supportive statements or questions, (2) acceptant or clarifying statements or questions, (3) problem-structuring statements or questions, (4) statements evidencing no supportive intent, (5) directional statements or questions, (6) reproving, disapproving or disparaging statements or questions, (7) teacher-supportive statements or questions.

Another instrument developed to measure classroom behavior was the OScAR technique (Medley and Mitzel, 1958). This technique

permitted the recording of as many aspects of what goes on in the classroom as possible regardless of their relationship to any dimensions or scales. Medley and Mitzel found three aspects in which behavior in the classrooms differed: (1) emotional climate, (2) verbal emphasis, and (3) social structure. The authors felt that relatively untrained observers using this instrument could develop reliable differences in classrooms of different teachers. In 1962, Medley and Mitzel suggested that educators measure the effects of teacher behavior, seeing which behaviors are followed by which effects. They felt that if this information were made known to the teacher, he could modify his behavior and hence increase his competence.

Flanders (1960) felt that verbal behavior constitutes an adequate sample of the teacher's total impact on the students; he emphasized that measures of academic achievement and student attitude are correlated with the verbal pattern observed in the classroom. Flander's Interaction Analysis instrument designated two basic categories for summarizing teacher behaviors: indirect and direct. Indirect teacher categories indicated whether the teacher: accepts feeling, praises or encourages, accepts or uses ideas of students, asks questions. Direct teacher categories indicated whether the teacher: lectures, gives directions, and criticizes or justifies authority. Flanders concluded that the more indirect the teaching the greater the amount of subject matter achievement that takes place in the classroom. Direct influence tended to restrict

the student's freedom of action. In an article in 1962, Flanders suggested that special emphasis be given to the concept of "flexibility of teacher influence" by which is meant that a teacher can adjust the direct and indirect aspects of his behavior according to the situational requirements of the moment.

An instrument was developed by Soar (1966), the South Carolina Observation Record, to use in parallel with Flander's Interaction Analysis. The SCOR was devised to emphasize behaviors which interaction analysis normally ignored. Among these were nonverbal expressions of affect in the classroom, physical movement of teacher and pupils, the number and kinds of groupings, and the extent to which individual pupils or small groups of pupils were central in classroom activities. In 1968, Soar investigated the optimum teacher-pupil interaction for pupil growth and found that an effective teacher is one who can shift styles as he shifts objectives; for example, when the objective is learning concrete materials, the teacher should be direct and highly structured, but when the objective is creativity, the teacher should be highly indirect.

Classroom climate and interaction analysis does provide a framework for evaluating teacher behavior which is directly observable, systematic, and amenable to quantification. The fact that Soar (1966) developed a companion instrument to Flanders Interaction Analysis which investigates nonverbal expressions of affect in the classroom does allow for a greater in-depth study of teacher-student interaction. However, it

would appear that instruments of this type are limited to traditional classroom environments in which pedagogy is primarily a matter of verbal communication. Recent applications of operant conditioning techniques to the classroom through programmed instruction and precision teaching coupled with the burgeoning interest in open classrooms and self-initiated study programs re-emphasizes the limited sphere in which interaction analysis is an appropriate measure of teacher effectiveness.

The Helping Relationship

Carl Rogers in his article on the characteristics of a helping relationship stated:

> By this term [helping relationship] I mean a relationship in which at least one of the parties has the intent of promoting the growth, development, maturity, improved functioning, improved coping with life of the other (1958, p. 6).

Rogers pointed out that such a definition covers a wide range of relationships which are intended to facilitate growth such as the relationship between mother and child, father and child, physician and patient, teacher and pupil, and counselor and client. In addition to these one-to-one relationships, Rogers felt that the large number of individual-group interactions could also be intended as helping relationships.

Heine (1950) conducted a study which focused upon the way individuals who had gone for psychotherapeutic help to three different schools of psychotherapy perceived the therapeutic relationship. Heine found a high degree of agreement among the clients, regardless of the

orientation of the therapist, as to what elements had been helpful in the relationship. The clients stated that the most important factor contributing to the change in themselves was the personal characteristics of the therapist, in particular, such attitudes as trust, the feeling of independence they had had in making choices and decisions, and being understood by the therapist. Heine concluded that there is probably a psychotherapy and all existing psychotherapies are more or less approximations of this fundamental relationship.

In a similar light, Fiedler (1950) sought to determine whether a number of therapists from different schools of thought agreed on the conception of the nature of a good therapeutic relationship. He found that expert therapists from different orientations had similar descriptions of the ideal therapeutic relationship and thereby concluded that the therapeutic relationship may be a variation of good interpersonal relationships in general.

Whitehorn and Betz (1954) investigated the degree of success achieved by resident physicians as they worked with schizophrenic patients on a psychiatric ward. They found that successful resident physicians tended to interact on a person-to-person basis while unhelpful residents were more concerned with classification and diagnosis of symptoms.

Combs and Soper (1962) sought to determine if a select group of teachers would describe the helping relationship in the same manner

as the group of expert therapists reported by Fiedler. Combs and Soper found that opinions of a select group of teachers correlated .809 with the ideal relationship Q-sort of a group of expert therapists. It would appear from the results of the study that good teachers and therapists are in agreement about the nature of a helping relationship.

In a later study, Combs and Soper (1963a) designed a study to test whether "good" and "poor" teachers differ significantly from expert therapists in their conception of the characteristics of the ideal relationship. The results indicated that both good and poor teachers are in essential agreement with the expert therapists as to what an ideal relationship ought to be like. In discussing their results, Combs and Soper felt that the distinguishing factor lies not in what teachers know but whether they actually put this knowledge into practice.

Emmerling (1961) explored the relationship between certain personality traits of classroom teachers and the climate of instruction they provided as measured by pupil perceptions of these teachers. High school teachers were asked to identify problems, from most pressing to least pressing, they considered most urgent in their classrooms. Emmerling found that teachers could be divided into two groups: (1) those teachers who were concerned with problems which were self-related and student-oriented were considered "open," and (2) those teachers who were concerned with problems which were less self-related and less student-oriented were considered "closed." Emmerling found that "open"

teachers were perceived as more understanding, more positive in their concern for the student, and more congruent than "closed" teachers. Emmerling's results provide support for Roger's (1958) notion emphasizing the importance of the personal and attitudinal components of persons involved in the helping relationship.

What seems to be apparent in these studies is that the attitudes and feelings of the helper are more important than his procedures and techniques. Rogers has stated:

> It seems clear that relationships which are helpful have different characteristics from relationships which are unhelpful. These differential characteristics have to do primarily with the attitudes of the helping person on the one hand and with the perception of the relationship by the "helpee" on the other (1958, p. 11).

Research in Perceptual Psychology

Introduction

In 1959, Combs and Snygg supported the notion that good teaching could not be consistently measured by external appraisals of traits, styles, or characteristics. Specifically the authors stated:

> Behavior we observe in others, like the symptoms of disease or the rumble of thunder in a storm, are but the external manifestations of dynamic processes within the system we are observing. Sometimes, it will be enough to deal with such surface indications. For deeper and more precise understanding, however, it will be necessary for us to penetrate behind the behavior trait to more dynamic factors in the unique character of the individual's personal self and the goals, techniques, and values through which this self is expressed (1959, p. 121).

Thus, behavior observed from an external point of view is merely a symptom of the dynamic elements of the individual's perceptual organization. From the perceptual or internal point of view, behavior is a function of the perceptions existing for any individual at the moment of his behaving. Combs and Snygg have explained:

> Since behavior is always determined by the individual's perceptual field, we need only to learn to read behavior backwards in order to understand the perceptions of another person. That is, we can infer from another's behavior the nature of the perceptions which probably produced it (1959, p. 35).

The process of making perceptual inferences will be discussed in greater detail in Chapter III.

The possibilities of investigating effective teaching from an internal point of view gave impetus for a seminar held at the University of Florida in 1959. This seminar of graduate students and faculty set about to identify those perceptions which were most significant in determining effectiveness in the helping professions. A second impetus for the seminar came from research studies by Fiedler, Heine, and others which seemed to suggest that there is such a thing as a helping relationship and the characteristics of the relationship indicate a commonality of the attitudes and beliefs on the part of the helpers. In his comprehensive review of the characteristics of a helping relationship, Rogers (1958) stated what really mattered was not how the helper behaved but rather his intentions and purposes.

Thus the question proposed to the seminar was the possibility of describing good and poor helpers better in terms of their perceptions than we can in terms of their behavior. In particular:

> It seemed to us, if we could find the characteristic ways in which good helpers perceived we would have a more stable and accurate description of their differences, on the one hand, and a more immediately usable frame of reference for the construction of a curriculum for helpers on the other (Combs, 1961, p. 55).

Members of the seminar felt that effective helpers could be described in terms of their perceptions in five major areas: (1) the general frame of reference from which the helper approached his problem, (2) the ways in which the helper perceived other people, (3) the ways in which the helper perceived himself, (4) the ways in which the helper perceived the task with which he was confronted, and (5) the ways in which the helper perceived appropriate methods for carrying out his purposes. Under each of these headings are a series of probable continua with respect to the ways in which the helper saw events under that heading. These original perceptual hypotheses are presented below and on the following pages. In each instance the perceptual organization presumed to be characteristic of the helper is stated first:

A. General Frame of Reference

Internal	External
Growth orientation	Fencing in or controlling
Perceptual meanings	Facts, events
People	Things
Hopeful	Despairing
Causation oriented	Mechanics oriented

B. Seeing People and Their Behavior

As capable	Incapable
As trustworthy	Untrustworthy
As helpful	Hindering
As unthreatening	Threatening
As respectable	No account
As worthy	Unworthy

C. The Helper's Self

Sees self as:

Identified with people	Apart from people
Enough	Not enough
Trustworthy	Not trustworthy
Liked	Not liked
Wanted	Not wanted
Accepted	Not accepted
Feels certain, sure	Doubt
Feels aware	Unaware
Self-revealing	Self-concealing

D. The Helping Task and Its Problems

Purpose is helping	Dominating
Purpose is larger	Narrower
Purpose is altruistic	Narcissistic
Purpose is understanding	Condemning
Purpose is accepting	Rejecting
Purpose is valuing integrity	Violating integrity

Approach to problem is:

Positive	Negative
Open to experience	Closed to experience
Process oriented	Ends oriented
Relaxed	Compulsion to change others
Awareness of complexity	Oversimplification sic
Tolerant of ambiguity	Intolerant

E. Appropriate Methods for Helping

Sees helping methods superior to manipulating methods	Sees permissive methods superior to authoritarian

Sees cooperation superior to competition	Sees open communication superior to closed communication
Sees acceptance superior to appeasing	Sees giving methods superior to withholding
Sees acceptance superior to rejecting (attacking)	Sees vital methods superior to lifeless

(Combs, 1961, pp. 56-57).

Research Studies

The first study designed to test the validity of the hypotheses generated at the University of Florida seminar with respect to the nature of the helping relationship was conducted by Combs and Soper in 1963b. They examined the relationship between the perceptual organization of 29 counselors-in-training and ratings by faculty and supervisors. The 29 counselors-in-training were enrolled in a year-long NDEA guidance institute at the University of Florida. At the conclusion of the institute, all the counselors were placed in rank order from "best" to "worst" by their faculty and supervisors. Twelve of the original 41 hypotheses developed by Combs (1961) were explored. The perceptual data were obtained by asking each counselor to respond to four Human Relations Incidents. All twelve of the inferred perceptual characteristics were found to be significantly related to a general counselor effectiveness rating. The rank order correlations ranged from .39 to .64 and all were significant at the .01 level or better. The twelve factors of perceptual organi-

zation studied in relation to counselor effectiveness were inferred along the following bipolar dimensions:

1.	Internal	External frame of reference
2.	People	Things orientation
3.	Sees people as able	Unable
4.	Sees people as dependable	Undependable
5.	Sees people as friendly	Unfriendly
6.	Sees people as worthy	Unworthy
7.	Sees self as identified	Unidentified
8.	Sees self as enough	Not enough
9.	Sees self as revealing	Not revealing
10.	Sees purposes as freeing	Controlling
11.	Sees purposes altruistically	Narcissistically
12.	Sees purposes in larger	Smaller meanings

Combs and Soper concluded in terms of the new direction for research in the differentiation of "good" and "poor" professional workers. "These findings suggest that what we have failed to define objectively we may be able to distinguish perceptually" (1963b, p. 226).

Benton (1964) explored the question of whether two groups of Episcopal priests, rated effective or ineffective by their Bishops in respect to their counseling, could be discriminated from one another on the basis of their perceptual organization. Episcopal Bishops were initially asked to classify the priests in their dioceses as either effective or ineffective counselor-priests. Perceptual organization was inferred from protocols consisting of three elements: (1) responses to ten pastoral problems, (2) responses to card 13MF of the Thematic Apperception Test, and (3) three personal pastoral incidents. Benton reported that inferences based on these perceptual dimensions differed significantly between effective

and ineffective counselor-priests on the following five dimensions. The priest identified as effective tended to:

1. See himself more identified with people
2. See others as more able
3. Relate to people more as persons
4. See his role as more identified with people
5. See the purpose of the pastoral task as more freeing

Dimensions 1, 2, and 5 were significant beyond the .005 level and dimensions 3 and 4 were significant beyond the .05 level (Benton, 1964, p. 40).

Gooding (1964) investigated the perceptual organization of effective and ineffective elementary school teachers as nominated by principals and curriculum coordinators. In this study perceptual organization was inferred from observations and interviews. Observers, working in teams of two, observed each teacher for a one-hour period on each of three consecutive school days. In addition, each teacher was interviewed for an hour by two observers; the interviews revolved around the teacher's conversations regarding herself, her students, and her teaching. Each teacher was judged on twenty perceptual factors concerning perceptions of self, others, and the teaching task. The data were then subjected to discriminant function analysis. The interview data did not reach significance. However, inferences from classroom observations yielded results which were significant at the .001 level. It was reported that teachers described as effective were characterized by:

A. Perceptions of people and their behavior as:

1. Able rather than unable
2. Friendly rather than unfriendly
3. Worthy rather than unworthy
4. Internally rather than externally oriented
5. Dependable rather than undependable
6. Helpful rather than hindering

B. Perceptions of self as:

1. With people rather than apart from people
2. Able rather than unable
3. Dependable rather than undependable
4. Worthy rather than unworthy
5. Wanted rather than unwanted

C. Perceptions of the teaching task as:

1. Freeing rather than controlling
2. Larger rather than smaller
3. Revealing rather than concealing
4. Involved rather than uninvolved
5. Encouraging process rather than achieving goals

D. General frame of reference which emphasizes:

1. Internal rather than external
2. People rather than things
3. Perceptual meanings rather than facts and events
4. Immediate causation rather than historical

(Gooding, 1964, p. 52).

In reporting the results of his study, Gooding concluded, "...apparently in teaching as in counseling there is a strong relationship between the perceptual organization of the person and his effectiveness as a professional worker" (1964, p. 65).

Usher (1966) explored the perceptual characteristics of college professors and examined the relationship between their perceptions of

self, others, and the helping task and judgments of their effectiveness as college faculty members. The measures of faculty effectiveness were based on: (1) student ratings, (2) department head ratings, (3) publication and research, and (4) ratings of professional activities. Perceptual characteristics of each subject were inferred by trained judges from two classroom observations. Twelve perceptual hypotheses were adapted from a list of hypotheses (Combs, 1961) concerning the perceptual organization of persons engaged in the helping relationship. It was hypothesized that college faculty members who were rated as more effective in terms of several existing evaluative criteria would perceive:

A. Other people as:

1. More able than unable
2. More worthy than unworthy
3. More dependable than undependable
4. More internally motivated than externally molded

B. Themselves as:

1. More with people than apart from people
2. More wanted than unwanted
3. More worthy than unworthy
4. More able than unable

C. Their task in terms of:

1. Freeing rather than controlling
2. Larger rather than smaller meanings
3. Personal meanings rather than facts or events oriented
4. Accepting rather than not accepting (Usher, 1966, p. 42).

In discussing the results of the study, Usher reported that there was no significant relationship between the twelve perceptual hypotheses and

measures of faculty effectiveness as determined by department head ratings, publication and research, and professional activities. However, student ratings of faculty effectiveness were correlated with perception of others as able, worthy, dependable, internally motivated, and with the self-perception of being wanted. These were significant at the .05 level or better. In reviewing his results, Usher stated that some of the results of this study seemed contrary to previous research conducted by Combs and Soper (1963b), Benton (1964), and Gooding (1964). Usher offered a possible explanation:

> It may be that the perceptual organization of professionals is more pertinent to the more "human" and personal aspects of effectiveness in professional work than to the less personal aspects of research, publication, and professional activity (1966, p. 104).

In addition, Usher suggested that the essential nature of the helping task with elementary and secondary school teachers, counselors, and Episcopal priests may be different from the primary task of the college teacher.

Brown (1970) examined the relationship between eight dimensions of perceptual organization and a criterion of teacher effectiveness defined by a group of national finalists from the Outstanding Young Educator award program. Forty-eight elementary and secondary teachers were chosen from a population of OYE finalists, and forty-eight elementary and secondary school teachers were chosen at random to achieve a

comparison group. Perceptual inferences were made from instruments containing questions on classroom management, objectives and procedures, and self-evaluation. Brown found that OYE teachers were significantly differentiated through a Median Test from the control population in the following eight areas:

A. Frame of reference as:
   (1) hopeful rather than despairing

B. Other people as:
   (1) more worthy than unworthy
   (2) more unthreatening than threatening

C. Themselves as:
   (1) more with people than apart from people
   (2) more certain than doubting

D. Process of learning as:
   (1) having broad rather than narrow purposes
   (2) facilitating rather than evaluating

E. Methods as:
   (1) active rather than passive learning.

The series of Median Tests which were performed between OYE and comparison groups for each of the hypotheses yielded differences which were significant from the .0005 level of confidence to the .0001 level.

Vonk (1970) explored the relationship between eight dimensions of teacher perceptual organization and a pupil-rated effectiveness criterion. The sample consisted of elementary and secondary school teachers drawn from in-service teachers taking graduate courses at Florida Atlantic University. Pupil evaluations were determined by a self-anchoring scale adapted from the work of Kilpatrick and Cantril (1960). Perceptual data

were inferred from three critical teaching incidents. When the perceptual data were compared with student ratings of effective teaching the following perceptual dimensions were found to be significantly correlated at the .0005 level of significance:

A. General perceptual frame of reference as:

1. More positive than negative view of self
2. More identified rather than alienated from others
3. More openness rather than closedness to experience

B. Teaching purposes which emphasize:

1. Having broad rather than narrow purposes
2. Expanding uniqueness rather than seeking conformity
3. Discovering meaning rather than giving information
4. Disclosing self rather than concealing self
5. Seeking student ends rather than seeking own ends (Vonk, 1970, p. 62).

The results of this study provided support for the following three conclusions: (1) Pupil-rated teacher effectiveness was shown to be related to perceptual organization, inferred from essays about critical teaching incidents, at a high level of significance, (2) the teacher's general perceptual frame of reference and teaching purposes interacted with one another in relationship to the teacher effectiveness criterion, and (3) a factor analysis indicated that the factor structure of perceptual dimensions and/or the inferences concerning perceptual dimensions was holistic (Vonk, 1970, pp. 82-86).

The most recent study, Dellow (1971), examined the relationship between two different approaches for studying the question of teacher effectiveness: the perceptual approach of Combs and the facilitating conditions of Rogers. The two approaches were examined by investigating the relationship between selected perceptual characteristics of teachers and their classroom conditions of empathy, congruence, and positive regard. The sample consisted of 34 elementary teachers in first, second, third, and fourth grades. The perceptual data were inferred from two Human Relations Incidents, and the conditions of empathy, congruence, and positive regard were rated from audio-tapes of the teacher's interaction with students during reading instruction. In reporting the major findings Dellow concluded:

> First, the variables used in the perceptual approach to studying effective teaching are apparently different than those used in the facilitating conditions approach. The positive but low correlations between perceptual and behavioral variables indicate the two approaches may measure different facets of a teacher's behavior.
>
> Second, the high degree of intercorrelation between perceptual variables tends to confirm the observation of Combs and others that the perceptual organization is probably holistic in nature. That is, there is a high degree of interrelationship between the many perceptions one has of himself, others, and his purposes (1971, p. 80).

Summary

This chapter reviewed numerous studies which investigated effective teaching from an external point of view. These studies tended

to emphasize particular methods, traits, or styles which were directly associated with changes in pupil behavior. However, as Combs and Snygg have pointed out:

> Teachers cannot make changes in behavior directly. They can only serve as agents or catalysts in the process of change...What makes an effective teacher, it seems clear, is not the possession of some particular list of traits. It is not a kind of garment which can be put on or off as the season requires, nor is it a bag of tricks to be performed from time to time... Good teaching seems, rather, to be a matter of effective use of the teacher's unique personality. There will be as many methods of teaching as there are kinds of teachers (1959, p. 398-399).

In addition, the voluminous research conducted from the external point of view has failed to yield any specificity or consistency regarding a method or style which is effective for all teachers with all students in all teaching situations.

Studies were also reviewed which investigated teacher effectiveness from an internal frame of reference known as perceptual psychology. The focal point for these studies has been the perceptions teachers and helpers hold about themselves, other people, and the helping relationship. The findings of these studies suggest that there is a positive and significant relationship between perceptual organization and effectiveness as determined by a number of different criteria. These studies from the internal frame of reference have all emanated from an organized and comprehensive theory of behavior called perceptual psychology (Combs and Snygg, 1959). The perceptual variables utilized to

infer perceptual organization have been drawn from a list of 41 hypotheses originally developed by Combs (1961). A comparison of the research conducted in perceptual psychology thus affords a comprehensive analysis of variables which have been used with different sample populations such as counselors, priests, elementary and secondary teachers, and university professors. The fact that some variables have been replicated in different studies also allows one to note which perceptual variables have particular relevance for different educational levels.

Studies in the helping professions such as teaching, counseling, pastoral care, and psychotherapy indicate that the common characteristic of all these professions is not a particular method, trait, or technique. Rather what seems to be characteristic of these helping professions is the immediacy of reaction required of the helper.

Perceptual psychology appears to provide a fruitful methodology for research examining effectiveness as it is related to the helping professions. This study was an extension of research in perceptual psychology and examined the relationship between the perceptual organization of junior college instructors and their effectiveness in teaching as determined by student evaluations.

CHAPTER III

DESIGN OF THE STUDY

The purpose of the present study was to extend the previous research in perceptual psychology stemming from the theoretical position of Combs and Snygg (1959), and later articulated by Combs (1965; 1969) and Combs, Avila, and Purkey (1971). The study was designed to explore the relationship between the perceptual organization of junior college instructors and student ratings of their effectiveness as teachers.

Prior to the present study, four studies in perceptual psychology had investigated elementary and secondary school teachers (Gooding, 1964; Vonk, 1970; Brown, 1970; and Dellow, 1971), and one study had investigated college professors (Usher, 1966). The studies conducted by Gooding, Usher, Vonk, and Dellow selected effective and ineffective groups from a single population of teachers for comparison on various perceptual dimensions. Brown did not compare the best and worst subjects of a single population but instead randomly selected a group of national finalists from a population of Jaycee OYE's and compared this OYE group to a second group randomly selected from Florida Atlantic graduate students. Judgments of the criterion of teacher effectiveness were represented by the following: (1) ratings by principals

and supervisors (Gooding, 1964), (2) student ratings (Usher, 1966; Vonk, 1970), and national OYE finalists (Brown, 1970). In addition, studies have also investigated the perceptual organization of counselors (Combs and Soper, 1963b) and Episcopal priests (Benton, 1964).

Various instruments have been used to infer perceptual organization such as observations of classroom behavior (Gooding, 1964; Usher, 1966), interviews (Gooding, 1964), Human Relations Incidents (Combs and Soper, 1963b; Benton, 1964; Vonk, 1970; and Dellow, 1971), questionnaires of classroom management, objectives and procedures, and self evaluation (Brown, 1970), and the Thematic Apperception Test (Benton, 1964). The present study was the first to examine the relationship between six perceptual dimensions of junior college instructors and two student ratings of these same instructors.

Perceptual Dimensions

The six perceptual dimensions selected for investigation were derived from an original list developed during a year-long seminar at the University of Florida (Combs, 1961). The total list of 41 perceptual hypotheses has previously been discussed in Chapter II. The six perceptual dimensions chosen for investigation in this study have been utilized in previous perceptual research to infer perceptual organization. Investigations that employed dimensions parallel to the dimensions of this study are noted on the following page for convenient reference (See Table 1). The presence or absence of significant findings are also indicated.

TABLE 1

An Examination of the Six Perceptual Dimensions Utilized in This Study in Terms of the Relationship Found with Criterion Variables in Previous Research

Perceptual Variables Utilized in This Study	Previous Research Studies					
	Combs & Soper (1963b)	Benton (1964)	Gooding (1964)	Usher (1966)	Vonk (1970)	Brown (1970)
A-1 Internal-External	S	NM	S	NM	NM	NM
B-1 Able-Unable	S	S	S	S	NM	NM
B-2 Worthy-Unworthy	S	NM	S	S	NM	S
C-1 With people-Apart	S	S	S	NS	S	S
C-2 Adequate-Inadequate	S	NM	S	S	S	NM
D-1 Freeing-Controlling	S	S	S	NS	NM	NM

S - Significant
NM - Not measured
NS - Not significant

Formal Statement of Hypothesis

The major hypothesis of the research is that there will be a significant positive relationship between student ratings of faculty effectiveness and certain aspects of instructor perceptual organization. Specifically, the hypothesis is that junior college instructors judged most effective by student ratings will:

1. Have an internal rather than external frame of reference
2. See other people as able rather than unable
3. See other people as worthy rather than unworthy
4. See themselves as with people rather than apart from people
5. See themselves as adequate rather than inadequate
6. See teaching as a freeing process rather than a controlling process

Definition of Perceptual Dimensions

The following are the six perceptual dimensions to be examined by this research. Two separate statements for each of the dimensions have been prepared to define each continuum extreme. The perceptual characteristics of an effective teacher are defined in the first paragraph while the perceptual characteristics of an ineffective teacher are defined in the second paragraph.

A. THE TEACHER'S GENERAL FRAME OF REFERENCE

1. Internal - External

The subject is sensitive to and concerned with how things seem to others with whom he interacts and uses this as a basis for his own behavior.

The subject is insensitive to and unconcerned with how things seem to others with whom he interacts and uses this as a basis for his own behavior.

B. THE TEACHER'S PERCEPTIONS OF PEOPLE AND THEIR BEHAVIOR

1. Able - Unable

The subject sees others as having the capacities necessary to deal with their own problems successfully. He perceives others as basically able to make their own decisions and deal with their own crises effectively.

The subject sees others as being essentially unable to meet the crises in their lives and make their own decisions. His perceptions of the abilities of others are doubtful in nature.

2. Worthy - Unworthy

The subject sees other people as possessing a dignity and integrity which must be respected. He perceives others as essentially worthy, important people.

The subject sees other people as being unimportant, lacking in integrity, and whose dignity may be readily violated. He perceives people doubtfully in terms of their worth and value as persons.

C. THE TEACHER'S PERCEPTIONS OF HIMSELF

1. With people - Apart from people

The subject sees himself as a part of mankind, as identified with people and with groups. He perceives himself as deeply and meaningfully related to diverse persons and groups.

The subject sees himself as apart, removed, withdrawn, or alienated from other people. He perceives himself as not deeply identified with diverse groups or persons.

2. Adequate - Inadequate

The subject sees himself in essentially positive ways. He sees himself as generally liked, wanted, successful, and able. He is able to confront the world with openness and acceptance.

The subject sees himself in essentially negative ways. He sees himself as generally unliked, unwanted, unsuccessful, and unable. He is not able to confront the world with openness and acceptance.

D. THE TEACHER'S PERCEPTIONS OF THE HELPING RELATIONSHIP

1. Freeing - Controlling

The subject perceives the purpose of the helping relationship as one of freeing students to be more open to their experiences. He sees the task as essentially one of releasing, facilitating, assisting, and encouraging behavior. He believes that people should be free to explore and discover their own best ways.

The subject perceives the purpose of the helping relationship as one of controlling and directing people in selected, preconceived experiences. He sees the task as essentially one of manipulating behavior. He believes that people must be coerced and inhibited or rewarded and appeased in order to "shape" responses.

Selection of Subjects and Collection of Data

The subjects in this study were 32 junior college instructors at St. Johns River Junior College. St. Johns River Junior College is a public junior college located in a semi-rural North Central Florida community with an average enrollment of 1200 students. The college offers courses in college transfer programs and terminal programs in business and technical education. The subjects in the study were representative

of the following departments: business, communications, guided studies, health and physical education, humanities, science, social science, and technical.

The academic dean of St. Johns River Junior College was contacted about the possibility of securing volunteers for the study. The author was invited to speak at the annual orientation of the faculty in August, 1969. At this time, the overall purpose and scope of the research was explained. It was decided by the author and the administrative staff of the junior college that the study would be conducted during the second trimester of the academic year 1969-1970.

In March, 1970, the academic dean sent a letter to the faculty eliciting their participation (Appendix A). The author also sent an introductory letter stating the general purpose and requirements of the study (Appendix B).

Of the 55 faculty members contacted, 36 indicated their willingness to participate in the study. Of the 19 members who were not participants in the study 4 department heads were eliminated because of excessive administrative responsibilities, and 2 instructors were eliminated because of small class size. Thirteen faculty members indicated they were too busy with teaching and counseling responsibilities. In the latter stages of the study 4 subjects were eliminated because of their failure to complete all the necessary data.

Each of the participants in the study was assigned a three-digit coded number so that all his materials would be anonymous. A file was maintained to collect the coded data for each subject. The academic dean's secretary acted as the coordinating secretary for the study and she maintained the master list of the instructors and their coded numbers.

A second letter (Appendix C) was sent to each of the participant instructors which scheduled appointment dates for group administrations of the Thematic Apperception Test. A detailed account of the administration of TAT written essays is reported in the section which describes the Thematic Apperception Test. As each group completed the written essays to the TAT, subjects were given an envelope which included report sheets for three Human Relations Incidents and an instruction sheet. A description of the Human Relations Incident report sheet is included in a later section of this chapter. Each subject also received a set of materials which included two student evaluation instruments and an instruction sheet for student administrators. A detailed account of the administration and collection of student evaluations is included in the description of the two rating forms.

It was recognized that teachers who volunteer for a study of this nature may be different from those who decline to participate. These limitations were an inescapable function of the voluntary nature of the study.

Inferred Perceptual Data

The Use of Inference as a Research Tool

In the perceptual frame of reference the causes of behavior are ascribed to perception, more precisely to the perceptual field of the behaver at the instant of action. "At any moment a person's behavior, then, is a consequence of all the perceptions available to him just as, in the computer, answers are products of the data fed in or already there" (Combs, 1969, p. 12). Thus, to understand behavior from an internal frame of reference, it is necessary to discover how things seem to the individual. If people behave according to how things seem to them, then behavior is a symptom of the dynamics of causation which lie in the perceptual field of the behaver. Since perceptions lie inside people, they are not available for direct measurement.

The seminar investigating the perceptual organization of effective helpers reported five characteristic ways of perceiving by which "helpers" can be distinguished from "nonhelpers:" (1) general frame of reference, (2) people and their behavior, (3) the helper's self, (4) the helping task and its problem, and (5) appropriate methods for helping (Combs, 1961, p. 56).

Since perceptions lie inside people, they are not available for direct measurement. Thus, perceptions need to be approached from some sort of inference. Combs (1958) has suggested that the nature of

an individual's perceptual organization can be determined through inferences based upon systematic observations of behavior by trained observers. In other words, the ways in which the person sees himself and the world in which he lives can be determined through inferences based upon observations of behavior. Courson (1963) explained that since perceptions and behavior are connected and since we realize that this connection does not operate in a simple one-to-one manner, interpretations of behavior are best made through the medium of a trained observer. Combs and Soper have stated:

> Phenomenological research begins with careful observation. From such observations it develops inferences as to the perceptions of the subject, which inferences are checked against further observations of behavior. By such a repeated process of observation, inference, prediction, observation, inference, etc., the psychologist using a perceptual frame of reference is able to explore the dynamics of the subject's behavior (1957, p. 143).

Some psychologists object to the use of inference as a scientific tool on the grounds that the process is too subjective and that the possibilities for error and bias on the part of the trained observer introduce considerable distortions in judgment. Combs, Avila, and Purkey have responded to this criticism:

> The use of self as an instrument for making observations does, indeed, add a possible source of distortion not present in more mechanical ways of observing and recording behavior. This does not warrant rejection of the method, however, if the sources of error can be controlled. The making of inferences, in itself, is not unscientific. The way in which they are made and tested may be unscientific, however (1971, p. 191).

Courson (1963) conducted a study which attempted to explore the relationship between certain internal perceptual factors and externally evaluated behaviors which are believed to be characteristic of the adequate personality. The sample studied included 81 seniors at the P. K. Yonge Laboratory School of the University of Florida. In terms of internal data based upon inferences stemming from observations of written behavior, Courson concluded:

> The reliability of these inference scores was demonstrated by (1) showing that several observers working independently could reach substantially similar conclusions about the same observed behavior sample, and (2) showing that observers reached substantially similar conclusions about samples of behavior when the same samples were reobserved after a period of approximately one month (1963, p. 52).

Courson's study supported the contention that the use of inference as a research tool offered new diagnostic insights about the perceptual meaning of behavior. Courson outlined in detail the process of making perceptual inferences:

> For the purpose of making perceptual inferences, the raters were encouraged to use themselves as instruments, to use any and all data that had some personal meaning for them. They were encouraged to make the kind of inferences they would make for their own uses, inferences which would not necessarily need to be supported or defended by concrete evidence. They were instructed to use the full resources of their experience as behavioral scientists and as sensitive human beings in making the inferences for the perceptual data.
>
> Fundamentally, the making of perceptual inferences involves a kind of projecting one's self into another as that other person is revealed by his behavior. This

> involves searching out how this other person sees himself and the world around him in order for the observed behavior to be meaningful, to make sense, to have direction and purpose. The inferential process involves looking beyond the mere behavior to the probable meaning of the behavior (1963, p. 37).

In addition, research using perceptual inference indicates that trained observers used as instruments in educational and psychological research can provide valuable and statistically significant reliable data which is inaccessible to more conventional methodologies primarily concerned with external observations of behavior.

Rationale for Instruments Used in Collection of Perceptual Data

The design of the present study utilized two written projective materials as samples of behavior from which inferences could be made about the perceptual dimensions in this study. In discussing the value of projective tests for the collection of perceptual data, Combs and Snygg have said:

> The assumption of projective tests in that whatever meaning he [subject] puts into such materials must be related to his own perceptual field. In the TAT for example, he is asked to tell a story about a picture, the details of which are purposely quite vague and ambiguous. Therefore, whatever story the subject tells he is projecting into the picture from his own personality or experience; the skilled interpreter is thus provided with a sample of some of the subject's meanings. In perceptual terms such tests make it possible to explore the individual's perceptual field with particular reference to the goals, values, and techniques important in his own unique economy (1959, p. 109).

Written projective materials were selected because they are rich sources of material for understanding behavior from an internal frame of reference. "Unlike observations of behavior or inferences from what people have to say, which must be caught 'on the wing,' written material can often be held and studied for comparatively long periods of time" (Combs, Avila, and Purkey, 1971, p. 204).

Anastasi (1961) has pointed out that the underlying assumption of projective tests is that the way in which the individual perceives and interprets the test material, or "structures" the situation, will reflect fundamental aspects of his psychological functioning. The test materials serve as sort of a screen upon which the subject "projects" his characteristics, attitudes, feelings, and beliefs. Written projective essays were thus selected as the most favorable means of procuring perceptual data.

Thematic Apperception Test (TAT)

The first projective instrument consisted of five cards selected from the Thematic Apperception Test developed by Murray (1943). The TAT consists of a set of pictures which are vague and allow considerable freedom for originality and imagination in response. These pictures were especially designed to disclose the feelings, needs, and conflicts of the individual subject.

The choice of the TAT as an effective instrument for perceptual inference was influenced by three earlier studies in which the TAT was a primary instrument for investigation.

Combs (1946) studied the validity and reliability of interpretation of responses to the TAT. Two major questions were asked: (1) to what extent can other persons than the author arrive at the same results and analysis (external congruity)?, and (2) to what extent does repeated analysis by the author after a period of time give the same results (self congruity)? In reporting his results, Combs presented evidence of significant high internal and inter-judge reliability of interpretation scores.

Alexander (1950) reported a study which attempted to explore the possiblity of using a projective test which would be of value in studying teachers and their interpersonal relationships with children. Using a picture-story technique, Alexander showed that it was possible to predict certain ways of behavior of teachers and that these predictions have close agreement with the behavior observed in the classroom. In reporting his results, Alexander concluded:

> In consideration of the wide range of information provided by the analysis of mental capacity, emotional make-up, and patterns of adjustment, it seems to be worthwhile to investigate the possibilities for the use of the TAT in selection of teachers (1950, p. 275).

Arnold (1962) conducted a study in which she used the TAT as a device for screening candidates for religious life in the Roman Catholic Church. Responses to the TAT cards provided a basis for inferences regarding basic attitudes, patterns of interpersonal relationships, principles of action, motivational patterns and religious meaning -- all of

which could be considered perceptual organization. Arnold utilized a scoring device called TAT sequence analysis in which the subjects' stories are abstracted into their "import" or basic meaning for the subject. Workers trained by Arnold in this method of analysis claim valid predictions for success in the religious order.

Research in the area of perceptual psychology which has utilized TAT picture stories to infer perceptual data include Courson (1963) and Benton (1964).

The following five cards were selected from the TAT for use in data collection for this study:

1. "12F" The portrait of a young woman. A weird old woman with a shawl over her head is grimacing in the background.

2. "7GF" An older woman is sitting on a sofa beside a girl, speaking to her. The girl, who holds a doll in her lap, is looking away.

3. "13MF" A young man is standing with downcast head buried in his arms. Behind him is the figure of a woman lying in a bed.

4. "4" A woman is clutching the shoulders of a man whose face and body are averted as if he were trying to pull away from her.

5. "8GF" A young woman sits with her chin on her hand looking off into space (Murray, 1943, pp. 18-20).

The above TAT cards were selected a priori because it was felt that these pictures would elicit responses which would provide the

most meaningful data for inferring the perceptual organization of junior college instructors.

Card 12F was selected because it might provide themes which would elicit attitudes, beliefs, and feelings about young people in general and students in particular.

Card 7GF was chosen because of a probable stimulus value for themes having to do with didactic situations.

Card 13MF was selected because it seemed to have strong implications for sexuality. It is also amenable to illness, death, suicide, judgments of morality, interpersonal strife, and aggression.

Card 4 was chosen because it was a probable stimulus for themes which principally have to do with heterosexual relationships.

Card 8GF was selected because it seemed to have possibilities for eliciting a wide range of individual responses. The card encourages the subject to "project" his own thoughts and philosophy of life.

Administration of the TAT

All subjects in the research were informed that participation in the study would take about an hour and a half and would involve writing essays about some pictures which would be shown to them. The instructors were assured their productions would be held in confidence and that in no way would their productions have reflections on their professional standing.

Because of the disparity in teaching schedules, administrations of the TAT was accomplished in three group sessions held within a two-week period. Administration was identical in all three sessions. The researcher made a short preliminary statement as to the nature of the instrument and its purpose. After a brief attempt to put the group at ease, the subjects were told:

> I am going to show you five pictures on a screen one at a time. Each picture is a scene involving some people. I am going to ask you to write a story about each scene using the following procedure.
>
> First, I would like you to describe what is occurring at present in the scene. In other words, make up a story which starts with what is presently going on in the picture.
>
> Second, I would like you to tell about the events which may have led up to the present scene.
>
> Third, I would like you to conclude the story by telling what the outcome might be; in other words, how does the story end?
>
> In all three segments of the story, it would be helpful if you use your imagination and describe the thoughts and feelings of one of the individuals shown rather than an objective description of the story.
>
> Most people can make a story about each of these pictures in about fifteen minutes so in each case I will ask you to stop writing at the end of fifteen minutes. Do not worry if you are not finished in time.

Writing materials were distributed for reporting subject responses and the pictures were presented successively by means of an

opaque projector. After a timed exposure of 15 minutes the picture was removed from the projector and the next picture was presented. The written essays were placed in a manila envelope, sealed, and delivered to the coordinating secretary for coding and removal of identifying information. All of the written essays were placed in manila folders identified only by the subject's three-digit coded number.

Human Relations Incident (HRI)

The second set of protocols collected for each subject in the study consisted of three essays written about a significant past event which involved the subject and one or more other persons. In this instrument, the subject was completely free to choose events which had particular meaning for him.

There has been considerable utilization of the Human Relations Incident in perceptual research. Courson (1963) collected written essays from seniors at P. K. Yonge Laboratory School at the University of Florida on the topic "A teenager's advice to the world." Courson felt that this essay approach would minimize threat in terms of how subjects saw themselves, other people, and the world around them. This self-reported incident technique as a means of eliciting data from which perceptual organization may be inferred has been successfully demonstrated by Combs and Soper (1963b) in their investigation of the perceptual organization of effective counselors.

Vonk (1970) utilized the Teaching Incidents Essay consisting of three teaching experiences freely reported by the teacher-subject. The teacher was asked to select incidents from his teaching experience in which he functioned in a particularly effective manner. Vonk emphasized that, "other than a request to avoid a case history approach, with its preliminary information and ultimate outcome, no other structure was specified" (1970, p. 53). Human Relations Incidents were also used in studies by Benton (1964) and Dellow (1971).

In this study subjects were asked to think of three significant past events which involved themselves and one or more other persons. Subjects were instructed to: (1) describe the situation as it occurred at that time, (2) tell what they did in that particular situation, (3) tell how they felt about the situation at the time they were experiencing it, and (4) tell about how they feel about the situation now.

At the completion of the group TAT administrations, subjects were given envelopes which included an instruction sheet and report sheets for three Human Relations Incidents (See Appendix D). The subjects were informed that they were to complete the three human relations incident reports within a two week period and return them to the coordinating secretary. The secretary then coded the HRI's and placed them in the subject's file.

Scoring the Perceptual Inferences

When all the data were collected for the study, the secretary prepared a manila folder which identified each subject only by a three-

digit number. The folder included five written essays to TAT cards and three human relations incidents. All of the materials were similarly coded so as to preserve subject anonymity. The completed written essays were then distributed to the judges.

The written protocols were scored by the author and three other judges. The judges were two male doctoral students in educational psychology, a female assistant professor who was concurrently doing research in perceptual psychology, and a female undergraduate student who had considerable experience with sensitivity and encounter groups. All four of the judges involved were trained for participation in several research projects utilizing similar projective-essay materials.

The training of the judges took place during a two-month period in which sample essays were used to evaluate inter-judge reliability as well as the degree of understanding of the inferential technique. The theoretical position of perceptual psychology was discussed in great detail and the judges were clearly instructed as to the exact meaning of each of the six perceptual dimensions. Oral instructions were given to the judges to the effect:

> Each of you in our discussion here has indicated a basic understanding of the phenomenological point of view. Now familiarize yourself with the perceptual dimensions to be used in this study. Each perceptual dimension is to be used as a bipolar continuum, with the first paragraph on each score sheet defining the left side (or low end) of the continuum and the second paragraph defining the right side (or high end) of the continuum.

> Using any information contained within the protocols, make an inference about each person's perceptual organization by circling the number which you think best approximates that person's position on the continuum. Remember you are to use an internal frame of reference. For example, on the perceptual dimensions you are to make inferences about how the individual sees himself, not how you see him from an external point of view. This is important to keep in mind (Dellow, 1971, p. 106).

After several practice protocols were scored in this manner, rating ceased and the author and judges talked about their ratings for each protocol. Each person was asked to explain the rationale for his ratings. This procedure was repeated several different times, each time using sample protocols. On two occasions, Dr. Arthur W. Combs, who had been instrumental in the development of the original 41 hypotheses, attended practice sessions. After approximately ten hours of instruction, data were collected for a reliability study. The reliability study ended when judges demonstrated a predetermined level of reliability concerning their inferences of perceptual organization. The specified reliability was defined as having the four judges reach agreement within a two-point limit on a seven-point continuum, for a minimum of 75 percent of the perceptual items. The percent of agreement was calculated by determining the number of agreements within a two-point specified limit and dividing this quantity by the number of possible agreements. The reliability of the training data of the study was 88.6 percent agreement for six proto-

cols. This method of assessing inter-rater reliability had previously been used in studies by Gooding (1964), Vonk (1970), Brown (1970) and Dellow (1971).

During the present investigation three reliability checks were calculated; two groups consisted of 11 protocols each and one group consisted of 10 protocols. Each of the three checks was above the 75 percent specified standard of reliability (See Table 12 of Chapter IV for complete data concerning the number, the intervals, and the results of the periodic reliability checks).

To counteract any possible halo effects, judges were instructed to rate all of the 5 TAT's and 3 HRI's on one perceptual dimension before proceeding to the next dimension. Raters were given rating sheets with only one perceptual dimension on each (Appendix F). Each judge received 64 packets of score sheets (2 packets for each subject -- TAT and HRI protocols were rated independently). Each packet contained a separate score sheet for each variable, stapled together in the following order: A-1, B-1, B-2, C-1, C-2, and D-1. The perceptual characteristics hypothesized as describing the effective teacher appear to the left of the seven point continuum -- indicated by the number 1; and the perceptual characteristics hypothesized as describing the ineffective teacher appear to the right of the continuum -- indicated by the number 7. The judges were then instructed to read from all three HRI's (or five TAT's) for one subject at a time and make a global judgment about the teacher's per-

ceptual organization on one variable. After scoring that dimension, the judges were instructed to fold the page and go on to the next set of protocols which were to be scored on the same variable.

Administration of the Student Rating Forms

The two student rating forms, the TRS and PIPI, were administered to the pupils of all the instructors participating in the study. Each instructor to be included in the study had to have a minimum of at least twenty student evaluations. At St. Johns River Junior College, each instructor is required to teach four or five courses per semester. In consideration of the time factor involved in the administration of the forms, it was decided that two of the four or five classes would be chosen for evaluation. These two classes were selected at random from a list of courses in the College Catalogue. A set of materials sealed in a manila envelope was distributed to each instructor; these materials included two student evaluation instruments and an instruction sheet for student administrators (See Appendix G). The exterior of the envelope contained the instructor's name and the two sections in which the evaluations were to be made, and the total number of forms enclosed. The number of forms allocated for each instructor was based on enrollment figures provided by the academic dean's office. Each instructor was asked to designate a convenient time for administration of the instruments. In addition, he was to select one student in each section who would be responsible for distribution and collection of the rating forms. The instructor was re-

quested not to be present during the administration of the instruments. The student administrator passed out the materials to each student present in the class during evaluation. The administrator then read the initial instruction sheet along with the students (See Appendix H):

> The purpose of the research is to find out the characteristics of good and poor teachers from the students point of view. You can help us in our investigation by responding to the following three evaluations of teacher effectiveness.
>
> First, we are asking you to list the qualities and characteristics of the best and worst teacher you have ever had.
>
> Second, when you have completed the written description, turn to the Teacher Rating Scale and proceed to rate the instructor presently being evaluated according to the directions provided.
>
> Third, proceed to the Purdue Instructor Performance Indicator and read carefully the directions and examples provided. Then proceed to rate the instructor presently being evaluated.
>
> It is not necessary for you to put your name on any of these evaluations.

When all the students had completed the two rating forms, the student administrator collected the forms and placed them in a manila envelope. The envelopes were then resealed and returned to the coordinating secretary. The coordinating secretary then removed all identifying information and affixed the instructor's code number on the outside of the envelope. The student rating forms were tabulated after all the perceptual data had been completed and each instructor received an average mean score for each instrument.

Student Rating Forms

All students of the cooperating instructors at St. Johns River Junior College were asked to rate each of their instructors on the basis of two rating forms.

Purdue Instructor Performance Indicator (PIPI)

This instrument was designed as an empirical tool to assess objectively the basic relationship of professor and student in higher education (See Appendix I). According to the manual provided with the instrument, the PIPI was designed primarily as an instrument to provide a quick, economical, reliable, and valid measure of student opinion of college instructors as teachers. The instrument is a forced choice type of rating scale. The rater is required to make a series of choices from blocks of descriptive behavioral items of those items most characteristic of or applicable to the instructor being rated. The forced choice technique forces the rater to choose between descriptive phrases which have an equal preference index but differ at statistically significant levels in their power to discriminate between instructors who are effective versus instructors who are ineffective.

This scale was selected because it is one of the most widely used rating scales in the nation. The forms of the scale were constructed with a test-retest stability coefficient which yields a reliability quotient of .95 over a three-week interval. The manual stated that in regard to validity there is no independent objective measure other than the student's

expressed opinion. Hence the problem of validity may be resolved by equating it with the statistically determined reliability of the instrument.

The scale consists of twelve tetrads including twenty-four items characteristic of effective college instructors which discriminate and twenty-four items which do not discriminate. The maximum score obtainable on the scale is 24 indicating that the instructor possesses all behavioral traits characteristic of the high criterion group (effective college instructors).

Self-Anchoring Scale of Teacher Effectiveness (TRS)

Kilpatrick and Cantril (1960, p. 158) described the self-anchoring scale as one in which each respondent is asked to describe, in terms of his own perceptions, goals, and values, the top and bottom or anchoring points of the dimensions on which scale measurement is desired, and then to employ this self-defined continuum as a measuring device. The self-anchoring scale was an attempt to apply the first person approach to the measurement of psychological variables. The scale was constructed to avoid the rigidly predetermined dimensions and verbal categories employed by many questionnaires to reflect subjective appraisals. Kilpatrick and Cantril emphasized that the whole point of the method is that the scale is a self-defined continuum anchored at either end in terms of personal perception. The authors initially tested a wide cross section of adult Americans to determine individual responses to the question of the best and worst ways of life.

In terms of evaluating junior college teaching, the TRS allowed the individual student to determine what connotes good and poor teaching from his point of view. In a previous study, Vonk (1970) constructed a ladder and numbered each of eleven steps (See Appendix J). This study employed the same ladder approach. The bottom of the ladder represented the worst teacher as seen by the student, and the top of the ladder represented the best teacher as seen by the student. Each end of the ladder was labeled appropriately.

Each student was encouraged to respond to the TRS in terms of how he defined good and poor teaching. Specifically, the students were asked to: (1) carefully think about their own personal definitions of the best and worst teacher for them, (2) briefly write a description of the best and worst teacher, (3) imagine the best teacher at the top of the ladder and the worst teacher at the bottom of the ladder, (4) decide where their present teacher would belong on the ladder, and (5) indicate their decision by circling the appropriate number on the rating ladder.

Reliability data were collected for the TRS in a Human Growth and Development course at the College of Education, University of Florida. A test-retest reliability was established by readministering the TRS after a 14 day period and correlating the scores of the first administration with the scores of the second administration. The test-retest reliability coefficient was .880 and was computed with the scores of 29 students who

were present on both days of testing. Vonk reported a test-retest reliability of .827 with the TRS.

Both of the test-retest reliability coefficients provided support for the TRS as a desirable criterion measure for this study.

Statistical Treatment of the Data

This study investigated the relationship between six perceptual dimensions as inferred from TAT and HRI written essays and student ratings of faculty effectiveness as determined by PIPI and TRS mean scores. The statistical tool chosen to analyze the relationship between the inferred instructor perceptual data and judged instructor effectiveness was the Pearson product-moment correlation.

Another area of concern was the degree of interrelationship existing within the six perceptual dimensions as inferred from TAT and HRI protocols. Product-moment intercorrelations were seen as the most appropriate procedure.

In order to determine how the number of perceptual dimensions were combined to yield a single score having the highest possible correlation with student ratings, the multiple stepwise regression correlation was selected as the most appropriate statistical device. The computer program utilized for multiple stepwise regression correlation was BRD02R (Dixon, 1968).

All of the computations of this investigation were performed with an IBM 360, model 40 computer at the University of Florida Computer Center.

CHAPTER IV

ANALYSIS OF DATA

Introduction

The data were gathered according to the procedure described in Chapter III. Each subject wrote three Human Relations Incident reports and five written essays to cards selected from the Thematic Apperception Test, and students rated their instructors with the Teacher Rating Scale and the Purdue Instructor Performance Indicator. On the basis of written essays to two projective instruments, the four judges inferred the nature of the perceptual organization of each instructor-subject, and placed these ratings on perceptual score sheets. The class means on the two student evaluations, TRS and PIPI, became the two criterion measures with which perceptual ratings were correlated.

The TAT and HRI perceptual ratings and the TRS and PIPI criterion scores were posted on computer input cards and key punched on IBM cards. Each IBM card was identified for that particular instructor. This completed preparation of the collected information for computer processing.

Results

The main purpose of the present research was to explore the relationship between subjects' inferred perceptual characteristics and certain measures of their effectiveness as instructors as judged by student evaluations. Pearson correlation coefficients were presented for each of the six perceptual dimensions for both TAT and HRI protocols and two criterion measures of teacher effectiveness. There were matrices of intercorrelation coefficients for six perceptual dimensions utilizing inferences from TAT and HRI protocols. Multiple stepwise regression correlations were examined between the six perceptual dimensions as inferred from TAT and HRI protocols and the two criterion variables. The TRS and PiPI were examined in terms of reliability, mean, standard deviation, and range. The inter-rater reliability for the training and actual data were represented.

The Relationship Between Perceptual Data as Inferred from TAT Protocols and Student Evaluations as Represented by TRS Scores

An examination of the correlation coefficients between perceptual ratings as inferred from TAT written essays and TRS student evaluations was appraised statistically, and the findings in Table 2 reveal that four of the six perceptual dimensions were positively and significantly related to the criterion variable. The perceptual dimension that had the highest relationship to the criterion was D-1 (Freeing-Controlling), indicating that instructors who saw the purpose of the helping relation-

ship as one of freeing students to be more open to their experiences were more favorably judged by student evaluations on the TRS. The next highest relationship to the criterion, C-2 (Adequate-Inadequate) provided support for the contention that instructors who saw themselves as generally liked, wanted, and able were rated as more effective instructors by their students. Dimensions A-1, internal-external frame of reference, and B-2, perceptions of others as worthy-unworthy, were also found to be significantly related to the criterion. Dimensions B-1, perceptions of others as able-unable, and C-1, perceptions of self as with-apart from people, were not significantly related to TRS ratings by students.

The Relationship Between Perceptual Data as Inferred from TAT Protocols and Student Evaluations as Represented by PIPI Scores

An examination of the correlation coefficients between perceptual ratings as inferred from TAT written essays and PIPI student evaluation is represented in Table 2. The findings indicate that two of the six perceptual dimensions were positively and significantly related to PIPI student evaluations. The two perceptual dimensions having a positive and significant relationship with the criterion variable were D-1, perceptions of the helping relationship as one of freeing students to be more open to their experiences, and C-2, perceptions of self as liked, wanted, and able. In comparing the correlation coefficients between perceptual data as inferred from TAT protocols and the two student evaluation instruments, the perceptual dimensions which bore the strongest re-

TABLE 2

Pearson Correlation Coefficients Between Perceptual Data as Inferred from TAT Protocols and Student Ratings as Represented by TRS and PIPI Scores

Internal Perceptual Data: Inferred TAT ratings		Pearson Correlations with Student Ratings	
		ON TRS (n=32)	ON PIPI (n=32)
A.	General Perceptual Frame of Reference		
	A-1 Internal-External	.371 *	.188
B.	Perception of Others		
	B-1 Able-Unable	.108	.051
	B-2 Worthy-Unworthy	.398 *	.287
C.	Perception of Self		
	C-1 With people-Apart from people	.212	.089
	C-2 Adequate-Inadequate	.481 **	.409 *
D.	Perception of the Helping Relationship		
	D-1 Freeing-Controlling	.551 **	.440 *

* Significant at the 5 percent level

** Significant at the 1 percent level

lationships on both criterion variables were D-1 (Freeing-Controlling) and C-2 (Adequate-Inadequate). The strongest dimension in both instances was D-1, while the next strongest dimension was C-2. Table 2 also indicated that perceptual dimensions as inferred from TAT protocols yield higher relationships to TRS student evaluations than to PIPI student evaluations.

The Relationship Between Perceptual Data as Inferred from HRI Protocols and Student Evaluations as Represented by TRS Scores

An examination of the correlation coefficients between perceptual ratings as inferred from HRI written essays and TRS student evaluations is represented in Table 3. The findings indicate that two of the six perceptual dimensions were positively and significantly related to the criterion variable. The perceptual dimension that had the highest relationship to the criterion was C-1 (With people-Apart), indicating that instructors who saw themselves as deeply and meaningfully related to diverse persons and groups were rated as most effective by their students. The next highest relationship to the criterion, C-2 (Adequate-Inadequate), indicated that instructors who saw themselves as generally liked, wanted, and able were rated as more effective by their students. Dimensions A-1 (Internal-External), B-1 (Able-Unable), B-2 (Worthy-Unworthy), and D-1 (Freeing-Controlling) were not significantly correlated with the criterion variable.

The Relationship Between Perceptual Data as Inferred from HRI Protocols and Student Evaluations as Represented by PIPI Scores

An examination of the correlation coefficients between perceptual ratings as inferred from HRI written essays and PIPI student evaluations is represented in Table 3. The findings indicate that none of the correlations was significant. A comparison of the data presented in Table 2 with that in Table 3 indicates that the results from the TAT data are more consistently related to PIPI ratings than is true for the perceptual ratings associated with the HRI. A comparison of the correlations presented in Tables 2 and 3 indicate a generally higher degree of relationship between the TRS student ratings and the perceptual ratings than is found for the PIPI student ratings and perceptual ratings.

The Relationship Between the Two Measures of Student Ratings: TRS and PIPI

The correlation coefficient between the TRS and PIPI student evaluations was .77 and significant at the one percent level. This finding suggests that there is a strong positive relationship between the two student ratings of faculty effectiveness.

The Interrelationship Within the Six Perceptual Dimensions as Inferred from TAT Protocols

Judgments of the six perceptual dimensions as inferred from TAT protocols were found to be interrelated when a matrix of intercorrela-

TABLE 3

Pearson Correlation Coefficients Between Perceptual Data as Inferred from HRI Protocols and Student Ratings as Represented by TRS and PIPI Scores

Internal Perceptual Data: Inferred HRI Ratings	Pearson Correlations with Student Ratings	
	ON TRS (n=32)	ON PIPI (n=32)
A. General Perceptual Frame of Reference		
A-1 Internal-External	.306	.162
B. Perception of Others		
B-1 Able-Unable	.228	.015
B-2 Worthy-Unworthy	.311	.110
C. Perception of Self		
C-1 With people-Apart from people	.417 *	.186
C-2 Adequate-Inadequate	.413 *	.244
D. Perception of the Helping Relationship		
D-1 Freeing-Controlling	.326	.183

* Significant at the 5 percent level

tions was computed. These interrelations, represented in Table 4, range from .383 to .697. The two dimensions most related (.671) were B-1, perceptions of other people as able-unable, and C-1, perceptions of self as with people-apart from people. The two dimensions least related (.383) were A-1, frame of reference as internal-external, and C-2, perceptions of self as adequate-inadequate. These results suggest a high degree of interrelationship within the six dimensions of perceptual characteristics. This finding appears to confirm reports by previous research (Gooding, 1964; Usher, 1966; Vonk, 1970) that all the perceptual dimensions researched contained a common element which was reflected in their positive and significant relationship to each other.

The Interrelationships Within the Six Perceptual Dimensions as Inferred from HRI Protocols

Judgments of the six perceptual dimensions as inferred from HRI protocols were found to be interrelated when a matrix of intercorrelations was computed. These intercorrelations, represented in Table 5, range from .461 to .836. The two dimensions most related (.836) were C-1, perceptions of self as with people-apart from people, and D-1, perceptions of the helping relationship as freeing-controlling. The two dimensions least related were A-1, general frame of reference as internal-external, and B-2, perceptions of others as worthy-unworthy. The intercorrelations for the HRI protocols appear to be considerably higher than the intercorrelations for TAT data, and once again there is the suggestion

TABLE 4

Matrix of Intercorrelation Coefficients for Six Perceptual Dimensions Utilizing Inference from TAT Protocols

Dimension			1	2	3	4	5	6
1.	A-1	Internal-External		.391*	.491**	.542**	.383*	.448**
2.	B-1	Able-Unable			.635**	.671**	.642**	.593**
3.	B-2	Worthy-Unworthy				.614**	.525**	.697**
4.	C-1	With people-Apart					.610**	.417**
5.	C-2	Adequate-Inadequate						.665**
6.	D-1	Freeing-Controlling						

* Significant at the 5 percent level

** Significant at the 1 percent level

TABLE 5

Matrix of Intercorrelation Coefficients for Six Perceptual Dimensions Utilizing Inference from HRI Protocols

Dimension			1	2	3	4	5	6
1.	A-1	Internal-External		.561**	.461**	.637**	.617**	.645**
2.	B-1	Able-Unable			.717**	.645**	.520**	.713**
3.	B-2	Worthy-Unworthy				.743**	.560**	.740**
4.	C-1	With people-Apart					.757**	.836**
5.	C-2	Adequate-Inadequate						.727**
6.	D-1	Freeing-Controlling						

** Significant at the 1 percent level

that the perceptual dimensions employed in this study are unitary rather than totally discrete.

Multiple Stepwise Regression Correlation Between Perceptual Data as Inferred from TAT Protocols and Student Ratings as Represented by PIPI Scores

Table 6 shows the multiple stepwise regression correlation between the six perceptual dimensions using ratings inferred from TAT protocols and PIPI student ratings.

The multiple regression equation is the statistical device by which a number of predictors are combined to yield a single score having the highest possible correlation with a criterion. It is a product moment correlation which is the correlation between the dependent variable or criterion and a second variable consisting of the weighted sum of scores in two or more predictor variables (DuBois, 1965, p. 164). In this way, each of the perceptual dimensions can be evaluated in a cumulative sense in order to examine which dimensions or combination of dimensions yields the strongest relationship with the criterion. The multiple stepwise regression correlation was selected as a meaningful statistic because it provided an analysis of variance of the initial predictor and each subsequent combined score as well as an analysis of significance for each variable and each weighted sum of variables.

The strongest variable is D-1, perceptions of the helping relationship as freeing-controlling, at .446. This was significant at the .05 level. RSQ is expressed to indicate the degree of variation in the

TABLE 6

Multiple Stepwise Regression Correlation Between Perceptual Data as Inferred from TAT Protocols and Student Ratings as Represented by PIPI Scores

Step Number	Variable Entered	R	RSQ	Increase in RSQ	F-ratio (test R)	F-ratio (test new variable)
1	D-1 Freeing-Controlling	.440	.194		7.22*	7.22*
2	B-1 Able-Unable	.587	.345	.151	7.62**	6.67*
3	C-2 Adequate-Inadequate	.685	.469	.125	8.26**	6.58*
4	B-2 Worthy-Unworthy	.700	.490	.021	6.50**	1.12
5	C-1 With people-Apart	.701	.491	.001	5.02**	0.045
6	A-1 Internal-External	.701	.491	.000	4.03**	0.006

* Significant at the 5 percent level

** Significant at the 1 percent level

criterion accounted for by the initial predictor and each subsequent combined score. RSQ indicates that this dimension accounted for approximately 19 percent of the total possible variance. This variance of 19 percent was significant at the .05 level. The addition of dimension B-1, perceptions of others as able-unable, increased the multiple R to .587 and was significant at the .01 level. RSQ indicates that these two dimensions accounted for approximately 35 percent of the total possible variance. The increase in RSQ accounted for by the addition of B-1 was 15 percent and was significant at the .05 level. When a third dimension was added, C-2 (perceptions of self as adequate-inadequate), a multiple R of .685 was produced and was significant at the .01 level. These three dimensions combined accounted for approximately 47 percent of the total possible variance. The increase in RSQ accounted for by the addition of C-2 was approximately 12 percent and was significant at the .05 level. When a fourth dimension was added, B-2 (perceptions of others as worthy-unworthy), the combined strength of the relationship between the first four dimensions and the criterion was R= .70. These four dimensions combined are capable of explaining 49 percent of the variation found in the criterion. When the last two dimensions were added, C-1 (With people-Apart) and A-1 (Internal-External), a total R of .701 was produced and found significant at the .01 level. The increase in RSQ accounted for by dimensions C-1 and A-1 was only .001 and was not significant. It appears from an examination of the data that four

of the dimensions, D-1, B-1, C-2, and B-2, are the relevant predictors in terms of the relationship between perceptual characteristics and student ratings as determined by PIPI scores. This would suggest that junior college instructors who perceive teaching as a freeing, facilitating type of relationship, see their students as essentially worthy and able to deal with their own problems successfully, and see themselves as liked, wanted, and able are rated most effective on the basis of student evaluations. Dimensions C-1 and A-1 did not appreciably add to the multiple R and should not be considered relevant predictors in terms of student evaluations, PIPI, when other variables are used as predictors.

Multiple Stepwise Regression Correlation Between Perceptual Data as Inferred from HRI Protocols and Student Ratings as Represented by PIPI Scores

Table 7 shows the multiple stepwise regression correlation between the six perceptual dimensions using ratings inferred from HRI protocols and PIPI student ratings.

The strongest predictor was C-2, perceptions of self as adequate-inadequate, and C-2 correlated .244 with the criterion variable. The correlation was not significant. The addition of variables B-1, D-1, A-1, B-2, and C-1 resulted in a multiple R of .30 and accounted for approximately 9 percent of the total possible variation. None of these correlations was significant. It would appear that inferences from HRI protocols do not relate significantly to student ratings as determined by PIPI scores when multiple stepwise regression correlations are performed.

TABLE 7

Multiple Stepwise Regression Correlation Between Perceptual Data as Inferred from HRI Protocols and Student Ratings as Represented by PIPI Scores

Step Number	Variable Entered		R	RSQ	Increase in RSQ	F-ratio (test R)	F-ratio (test new variable)
1	C-2	Adequate-Inadequate	.244	.059		1.89	1.894
2	B-1	Able-Unable	.277	.077	.017	1.20	0.540
3	D-1	Freeing-Controlling	.295	.087	.010	0.888	0.314
4	A-1	Internal-External	.298	.089	.002	0.660	0.065
5	B-2	Worthy-Unworthy	.300	.090	.001	0.514	0.026
6	C-1	With people-Apart	.300	.090	.000	0.412	0.001

Multiple Stepwise Regression Correlation Between Perceptual Data as Inferred from TAT Protocols and Student Ratings as Represented by TRS Scores

Table 8 shows the multiple stepwise regression correlation between the six perceptual dimensions using ratings inferred from TAT protocols and TRS student ratings.

The strongest dimension was D-1, perceptions of the helping relationship as freeing-controlling, at R= .551. This was significant at the .01 level. RSQ indicates that this dimension accounted for approximately 30 percent of the total possible variance. This variance of 30 percent was also significant at the .01 level. The addition of dimension B-1, perceptions of others as able-unable, increased the multiple R to .614 and was significant at the .01 level. RSQ indicates that these two dimensions accounted for approximately 38 percent of the total possible variance. The increase in RSQ accounted for by the addition of B-1 was 7 percent and was not significant. When a third dimension was added, C-2 (perceptions of self as adequate-inadequate), a multiple R of .684 was produced and was significant at the .01 level. These three dimensions combined accounted for approximately 47 percent of the total possible variance. The increase in RSQ accounted for by the addition of C-2 was approximately 9 percent and was significant at the .05 level. When a fourth dimension was added, A-1 (general frame of reference as internal-external), the combined strength of the relationship between the first four dimensions and the criterion was R= .70. These

TABLE 8

Multiple Stepwise Regression Correlation Between Perceptual Data as Inferred from TAT Protocols and Student Ratings as Represented by TRS Scores

Step Number	Variable Entered		R	RSQ	Increase in RSQ	F-ratio (test R)	F-ratio (test new variable)
1	D-1	Freeing-Controlling	.551	.303		13.052**	13.052**
2	B-1	Able-Unable	.614	.377	.074	8.773**	3.435
3	C-2	Adequate-Inadequate	.684	.468	.090	8.187**	4.747*
4	A-1	Internal-External	.704	.496	.029	6.648**	1.550
5	B-2	Worthy-Unworthy	.712	.508	.012	5.371**	0.629
6	C-1	With people-Apart	.714	.510	.001	4.331**	0.079

* Significant at the 5 percent level

** Significant at the 1 percent level

four dimensions combined are capable of explaining 49 percent of the variation found in the criterion. When the last two dimensions were added, B-2 (Worthy-Unworthy) and C-1 (With people-Apart), a total R of .714 was produced and found significant at the .01 level. The increase in RSQ accounted for by dimensions B-2 and C-1 was only .013 percent. It appears from an examination of the data that four of the dimensions, D-1, B-1, C-2, and A-1, are the relevant predictors in terms of the relationship between perceptual characteristics and student ratings as determined by TRS scores. This would suggest that junior college instructors who perceive teaching as a freeing, facilitating type of relationship, see their students as able to deal with their own problems successfully, see themselves as liked, wanted, and able, and are sensitive to and concerned with how things seem to others are rated most effective on the basis of student evaluations. Dimensions B-2 and C-1 did not appreciably add to the multiple R and should not be considered relevant predictors in terms of student evaluations, TRS, when other variables are used as predictors.

Multiple Stepwise Regression Correlation Between Perceptual Data as Inferred from HRI Protocols and Student Ratings as Represented by TRS Scores

Table 9 shows the multiple stepwise regression correlation between the six perceptual dimensions using ratings inferred from HRI protocols and TRS student ratings.

TABLE 9

Multiple Stepwise Regression Correlation Between Perceptual Data as Inferred from HRI Protocols and Student Ratings as Represented by TRS Scores

Step Number	Variable Entered		R	RSQ	Increase in RSQ	F-ratio (test R)	F-ratio (test new variable)
1	C-1	With people-Apart	.417	.174		6.332*	6.332*
2	C-2	Adequate-Inadequate	.443	.196	.022	3.546*	0.802
3	D-1	Freeing-Controlling	.451	.204	.007	2.386	0.249
4	B-1	Able-Unable	.452	.205	.001	1.736	0.035
5	B-2	Worthy-Unworthy	.455	.207	.002	1.356	0.075
6	A-1	Internal-External	.457	.210	.002	1.102	0.070

* Significant at the 5 percent level

The strongest predictor C-1, perceptions of self as with people-apart, correlated .417 with the criterion variable. This was significant at the .05 level. RSQ indicates that this dimension accounted for approximately 17 percent of the total possible variance. The addition of variables C-2, B-1, B-2, and A-1 resulted in a multiple R of .457 and accounted for approximately 21 percent of the total possible variance. With the exception of C-1, none of the correlations was significant. Aside from the fact that dimension C-1 produced a correlation of .417 with the criterion variable, the remaining five perceptual dimensions should not be considered relevant predictors in terms of student evaluations, TRS. These findings hold consistent with the results of perceptual data as inferred from HRI protocols and related to PIPI student ratings. In examining the four tables of multiple stepwise regression correlations, it is apparent that perceptual data as inferred from TAT protocols have a much greater relationship to the criterion variables than data inferred from HRI protocols. In particular, dimensions D-1, B-1, and C-2 appear to be the most relevant predictors in terms of the relationship between perceptual characteristics as inferred from TAT protocols and student ratings as determined by both PIPI and TRS scores.

Analysis of Measures

Teacher Rating Scale

The TRS, as reported in Chapter III, yielded a test-retest reliability coefficient of .880 during the preparation phase of the investigation.

The class mean for each teacher on the TRS became the teacher TRS score. The distribution of the 32 TRS scores ranged from 6.03 to 10.4 and had a mean of 8.31. The standard deviation for the TRS distribution was 1.10 (See Table 10).

TABLE 10

Reliability, Mean, Standard Deviation, and Range on the Pupil-Scored Teacher Rating Scale *

	TRS
Test-retest Reliability	0.880
Mean	8.32
Standard Deviation	1.10
Range	6.03 to 10.4

* n=32

Purdue Instructor Performance Indicator

The PIPI, as reported in Chapter III, yielded a test-retest reliability coefficient determined by the Pearson method of .95 over a three-week interval.

The class mean for each instructor on the PIPI became the instructor PIPI score. The distribution of 32 PIPI scores ranged from 10.3 to 15.5, and had a mean of 13.1. The standard deviation for the PIPI was 1.26 (See Table 11).

TABLE 11

Reliability, Mean, Standard Deviation, and Range on the Pupil-Scored Purdue Instructor Performance Indicator *

	PIPI
Test-retest Reliability	0.95
Mean	13.1
Standard Deviation	1.26
Range	10.3 to 15.5

* n=32

Reliability Data for Perceptual Ratings as Inferred from TAT and HRI Protocols

The Human Relations Incident reports and the written essays to selected TAT cards were judged according to the two-point standard of reliability described in Chapter III. As noted earlier the reliability for the training data was .886 percent agreement for four judges judging six projective essay materials. This exceeded the specified minimum of 75 percent.

The perceptual data for the 32 instructor-subjects were arranged into three separate batches, numbered I through III. The overall percent meeting the two-point criterion was .766 (See Table 12).

TABLE 12

Reliability Data of Perceptual Judging Based on Percent of Judgments Meeting the Two-Point Criterion

Group No.	Protocol No.	Percent Meeting 2 Point Criterion	Overall Percent
Training	T1 - T6	.886	
I	1-11	.773	
II	12-21	.775	
III	22-32	.758	
I-III			.766

CHAPTER V

CONCLUSIONS AND IMPLICATIONS

The present study attempted to utilize the theoretical framework of perceptual psychology to examine effective teaching at the junior college level. In particular, the research examined the relationship between six dimensions of perceptual organization and student evaluations of teacher effectiveness.

The primary hypothesis of the present study was that there would be a significant and positive relationship between certain perceptions of junior college instructors on the one hand and student evaluations of their effectiveness on the other hand. Previous research in perceptual psychology has reported a positive and significant relationship between the perceptual organization of teachers, counselors, and Episcopal priests and various criteria of judged effectiveness. This research sought to determine if a similar relationship held for junior college instructors. To test the general hypothesis, six specific hypotheses were formulated as dimensions of perception including the teacher's general frame of reference, perceptions of other people, perceptions of self, and perceptions of the helping relationship. Two projective instruments, TAT and HRI, were used to provide subject protocols upon which percep-

tual inferences were made and two instruments, TRS and PIPI, were used to assess students' evaluations of instructor effectiveness. This resulted in two perceptual measures and two student evaluation measures with which to examine correlation coefficients.

This chapter reports conclusions as they relate to each of the six perceptual dimensions. The conclusions drawn are based on the data collected and treated as described in Chapter III and Chapter IV.

Dimension A-1 (Frame of Reference as Internal-External)

This dimension stated that junior college instructors who are sensitive to and concerned with how things seem to others with whom they interact and use this as a basis for their own behavior will more often be rated as effective by their students than teachers who are less sensitive to and less concerned with how things seem to others with whom they interact.

Correlations between inferred perceptual ratings and effectiveness ratings on the basis of student evaluations warrant the following conclusions:

1. Junior college instructors rated by students on the TRS as effective instructors tended to have a general internal frame of reference when perceptual ratings were inferred from TAT written essays.

2. There was no significant relationship between an internal frame of reference as inferred from HRI protocols and either of the student ratings.
3. When multiple stepwise regression correlations were computed between perceptual data as inferred from TAT written essays and TRS student evaluations, general internal frame of reference was considered a relevant predictor.

Dimension B-1 (Others as Able-Unable)

This dimension states that junior college instructors who perceive others as having the capacity necessary to deal with their own problems successfully will be those who are rated as effective instructors.

Correlations between inferred perceptual ratings and effectiveness ratings on the basis of student evaluations warrant the following conclusions:

1. Correlations between perceptual ratings as inferred from HRI and TAT protocols and effectiveness ratings as determined by PIPI and TRS scores indicate that there was no significant relationship between perceiving others as able and student ratings of effectiveness.
2. When multiple stepwise regression correlations between perceptual data as inferred from TAT

written essays and student evaluations were computed, instructor's perception of others as able emerged as the second strongest predictor and was significant in both correlations at the .01 level.

3. When multiple stepwise regression correlations between perceptual data as inferred from HR1 protocols and student evaluations were computed, instructor's perception of others as able was not considered a relevant predictor.

Dimension B-2 (Others as Worthy-Unworthy)

This dimension states that junior college instructors who perceive others as possessing a dignity and integrity which must be respected will be those who are rated as effective teachers.

Correlations between inferred perceptual ratings and effectiveness ratings on the basis of student evaluations warrant the following conclusions:

1. Junior college instructors rated by students on the TRS as effective instructors perceive other people as essentially worthy, important people when perceptual ratings were inferred from TAT written essays. This correlation was positive and significant at the .05 level.

2. There was no significant relationship between instructor's perception of others as worthy as inferred from HRI protocols and either of the student evaluations.

3. When multiple stepwise regression correlations were computed between perceptual data as inferred from TAT written essays and PIPI student evaluations, instructor's perception of others as worthy was considered a relevant predictor.

Dimension C-1 (Self as With people-Apart)

This dimension states that junior college instructors who see themselves as deeply and meaningfully related to diverse persons and groups will be those rated as effective teachers.

Correlations between inferred perceptual ratings and effectiveness ratings on the basis of student evaluations warrant the following conclusions:

1. Junior college instructors rated by students on the TRS as effective instructors perceive themselves as identified with people and groups when perceptual ratings were inferred from HRI protocols. This correlation was positive and significant at the .05 level.

2. There was no significant relationship between instructor's perception of self as identified with people as inferred from TAT protocols and student ratings of effectiveness.
3. When multiple stepwise regression correlations between perceptual data as inferred from HRI protocols and student ratings as determined by TRS scores were computed, instructor's perception of self as with people emerged as the strongest predictor. Significance was at the .05 level.
4. When multiple stepwise regression correlations between perceptual data as inferred from TAT protocols and student evaluations were computed, instructor's perception of self as with people was not considered a relevant predictor.

Dimension C-2 (Self as Adequate-Inadequate)

This dimension states that junior college instructors who perceive themselves as generally liked, wanted, successful, and able will be those rated as effective teachers.

Correlations between inferred perceptual ratings and effectiveness ratings on the basis of student evaluations warrant the following conclusions:

1. Junior college instructors rated by students as effective instructors perceive themselves as adequate when perceptual ratings were inferred from TAT protocols. When inferred perceptual ratings from TAT protocols were correlated with TRS student ratings, the correlation was positive and significant at the .01 level. When inferred perceptual ratings from TAT protocols were correlated with PIPI student ratings, the correlation was positive and significant at the .05 level.
2. Junior college instructors rated by students on the TRS as effective instructors perceive themselves as adequate when perceptual ratings were inferred from HRI protocols. This correlation was positive and significant at the .05 level.
3. When multiple stepwise regression correlations between perceptual data as inferred from TAT written essays and student evaluations were computed, instructor's perception of self as liked, wanted, successful, and able emerged as a relevant predictor. Significance was at the .05 level.

4. When multiple stepwise regression correlations between perceptual data as inferred from HRI protocols and student evaluations were computed, instructor's perception of self as adequate was not considered a relevant predictor.

Dimension D-1 (Helping Relationship as Freeing-Controlling)

This dimension states that junior college instructors who see the purpose of the helping relationship as one of freeing students to become more open to their experiences will be rated as effective instructors.

Correlations between inferred perceptual ratings and effectiveness ratings on the basis of student evaluations warrant the following conclusions:

1. Junior college instructors rated by students as effective instructors perceive the helping relationship as one of freeing and facilitating when perceptual ratings were inferred from TAT protocols. When inferred perceptual ratings from protocols were correlated with TRS student ratings, the correlation was positive and significant at the .01 level. When inferred perceptual ratings from TAT protocols were correlated with

PIPI student ratings, the correlation was positive and significant at the .05 level.

2. There was no significant relationship between instructor's perception of the helping relationship as freeing and facilitating as inferred from HRI protocols and either of the student evaluations.

3. When multiple stepwise regression correlations between perceptual data as inferred from TAT written essays and student evaluations were computed, instructor's perception of the helping relationship as freeing and facilitating emerged as the strongest predictor.

4. When multiple stepwise regression correlations between perceptual data as inferred from HRI protocols and student evaluations were computed, instructor's perception of the helping relationship as freeing and facilitating was not considered a relevant predictor.

General Conclusions and Discussion

A detailed discussion with respect to each of the six perceptual dimensions has been reported. In view of the findings, additional observations seem warranted. Among these are the following:

Pearson Correlation Coefficient Between the Two Student Evaluation Instruments Seems to Suggest that the TRS and PIPI are Measuring Similar Aspects of Teacher Effectiveness

The positive and significant correlation (.77) between the two student evaluation instruments used in this study seems to suggest that the students' assumptions about what is good and poor teaching are related to the statements of the PIPI discriminating effective from ineffective college teaching.

This is interesting in light of the fact that these two instruments are quite different in construction. The PIPI is a forced choice rating scale which consists of twelve groups or blocks containing four statements. The student is asked to choose two statements from each block of four statements which best apply to the instructor being evaluated. Two of the choices are indicative of effective teachers and two of the choices are not. In this sense, there is a predetermined agreement regarding which items discriminate effective and ineffective teaching. An examination of the statements represented in the PIPI seems to indicate a primary concern with behavioral traits; that is, the majority of the statements deal with the teacher's overt behavior in the classroom, in particular, methods and techniques involved in the presentation and evaluation of subject matter. The PIPI could be seen as a closed instrument in the sense that it offers a finite number of descriptive traits.

On the other hand, the TRS is an open-ended instrument in which the student is free to describe, in terms of his own perceptions,

goals, and values, the anchoring points of a best-worst continuum of teacher effectiveness. The authors of the self-anchoring scale, Kilpatrick and Cantril (1960), have emphasized that the scale was constructed to avoid rigidly predetermined dimensions and verbal categories employed by many questionnaires to reflect subjective appraisals. The TRS first asks each student to briefly describe the characteristics of the very best and worst teacher he has ever had. In this sense, the student is anchoring the poles of a continuum from best to worst. The instructor is thus judged in terms of the student's analysis of how the instructor "fits" on the best-worst continuum.

A comparison of the construction of the two instruments would seem to suggest that the PIPI is essentially an objective evaluation, whereas the TRS is intentionally a subjective appraisal. Nevertheless, the high correlation reported between the two instruments would suggest a good deal of consistency regarding descriptive attributes of good and poor teaching.

A previous study by Vonk (1970) also utilized the TRS as a measure of teacher effectiveness. Vonk used the self-anchoring technique to obtain student evaluations from upper-elementary and secondary students and expressed confidence in the TRS as a reliable and valid measure of student judgments of effective and ineffective teaching.

In addition to a global evaluation on an eleven-point scale, the TRS provides a wealth of subjective descriptive statements regarding

students' personal assumptions of what connotes good and poor teaching. Used in conjunction with more objective measures of teacher effectiveness, the author feels the TRS could provide valuable information not sampled by rating scales, questionnaires, or forced choice techniques. Future research in the helping professions would find the TRS a valuable source for generating meaningful data.

The Correlations Between the Perceptual Data and Student Ratings Seem to Suggest that Inferences from TAT and HRI Protocols are not Measuring the Same Aspect of Perceptual Organization

A consistent finding in this research was that inferences from TAT protocols correlated significantly higher with the criterion variables than inferences from HRI protocols. The fact that previous studies (Combs and Soper, 1963b; Benton, 1964; and Vonk, 1970) used the Human Relations Incident and reported positive and significant correlations with criterion variables, called for a closer examination of the methodology for administering the Human Relations Incident in this study.

The author feels that two factors may have affected subject protocols in response to the HRI. First, the form of the HRI used in this study may have been too unstructured. Both Benton and Vonk modified the HRI so that it included incidents which were peculiar to either pastoral situations or teaching incidents. This provides closure in that the subject is asked to recall problem situations which have particular relevance and meaning for the helping relationship he is directly involved in. The HRI used in this study allowed for a more open field of exploration in that the

subject is asked to relate the most meaningful human experiences that involved himself and one or more other persons. It is the author's contention that since research in the area of perceptual psychology has dealt primarily with effectiveness in the helping professions, the most meaningful perceptions determining effectiveness might best be elicited by a Human Relations Incident involving that particular helping relationship.

Second, the time factor allowed for completion of the HRI's may have been a critical factor. In this research, subjects were given two weeks to write three human relations incidents. It might be possible that the two-week period afforded a mantle of security in which some subjects produced protocols which were deliberately designed not to disclose information which they considered too personal. Subjects' responses to TAT cards may have yielded more spontaneous and meaningful protocols because responses to each of the cards was limited to fifteen-minute sessions. The key to perceptual research lies in the reliability and validity of making inferences. Since perceptions are not open to direct measurement, the researcher infers the nature of the subject's perceptual organization through samples of behavior such as written essays, observations, and interviews. It has previously been stated that it is the central beliefs which have an organizing effect upon further perception and thus upon behavior exhibited by the individual. It is this core of self-concept which has a high degree of permanence and predictability. Consequently, to explore the bases of effectiveness in the helping professions, one must

gain access to these highly meaningful perceptions. It is felt by the author that the HRI's did not provide meaningful perceptual data because the administration of the HRI's tended to produce relatively unimportant aspects of self. As a result of this finding, the author would suggest that perceptual research consider the question of specific time intervals as instrumental in the procurement of relevant perceptual data.

The Relationship Between Perceptual Organization and Junior College Instructor Effectiveness Indicates that Certain of the Dimensions Emerge as Significant Predictors

The fact that HRI data might have been measuring peripheral aspects of self-concept was previously discussed in this chapter, and therefore the relationship between perceptual organization and teacher effectiveness will primarily concern itself with perceptual ratings as inferred from TAT written essays.

This was the first study in the area of perceptual psychology in which multiple stepwise regression correlations were used to determine the relative importance of certain perceptual dimensions for predicting teacher effectiveness as judged by student ratings. This statistical procedure allows the researcher to study the effects of combining perceptual dimensions, linearly and additively, in order to determine the extent of relationship between combined variables used as predictors and a criterion variable.

When multiple stepwise regression correlations were computed between perceptual data and student evaluations as determined by PIPI

scores, the combined strength of the relationship between the first four dimensions D-1, B-1, C-2, and B-2 was R=.70. These four dimensions combined are capable of explaining 49 percent of the variation found in the criterion. Dimensions C-1 and A-1 did not appreciably add to the multiple R and should not be considered relevant predictors in terms of student evaluations, PIPI, when other variables are used as predictors.

When multiple stepwise regression correlations were computed between perceptual data and student evaluations as determined by TRS scores, the combined strength of the relationship between the first four dimensions D-1, B-1, C-2, and A-1 was R=.70. These four dimensions combined are capable of explaining 49 percent of the variation found in the criterion. Dimensions B-2 and C-1 did not appreciably add to the multiple R and should not be considered relevant predictors in terms of student evaluations, TRS, when other variables are used as predictors.

According to the hypothesis of the study, five of the six perceptual dimensions demonstrate high predictive power when combined for both measures of student evaluation. C-1 (With people-Apart) was the only dimension which did not emerge as a predictor in either of the multiple stepwise regression correlations between inferred TAT written essays and the two measures of student evaluation.

An investigation of Tables 6 and 8 indicates that three perceptual dimensions emerge in the same relative order in terms of the relationship between perceptual variables used as predictors and both measures of teacher effectiveness.

The emergence of D-1 as the first predictor suggests that instructors who perceive the helping relationship as one of freeing students to explore and discover their own best ways are rated by students as effective instructors. This finding is very much in line with the perceptual view of teaching. According to perceptual psychology, the process of education is fundamentally a process of changing behavior, and the way to change behavior is to change perceptions. Combs and Snygg have said:

> The more intimately one perceives the relationship of concepts to self, the more certain, the more profoundly does information affect behaving. This discovery of the personal meaning of ideas, values, experiences, or the accumulated culture of the race, is the very essence of learning and the art of teaching is in helping people to make this discovery (1959, p. 385).

The addition of the second dimension, B-1, suggests that instructors who perceive others as having the capacities necessary to deal with their own problems successfully are rated by their students as effective instructors. It would seem that instructors who encourage students to discover in their own best way the personal meaning of subject matter would perforce see students as basically able to make their own decisions about meaningful educational experiences.

The addition of the third dimension, C-2, suggests that instructors who see the helping relationship as a freeing process and see students as able to discover their own best ways also tend to see themselves as liked, wanted, and able. This finding is in line with previous

perceptual research that has demonstrated the importance of the individual's self-concept in his professional effectiveness as a helper. It would seem that teachers who lack internal security are apt to be handicapped by their own unmet need when trying to help others.

The addition of dimensions B-2 and A-1 suggests that effective instructors see their students as possessing worth and dignity, and are also sensitive to the meanings of events for their students.

The data from multiple stepwise regression correlations between perceptual data and student evaluations suggest the possibility that there is a type of interaction among perceptual dimensions which is synergetic in the sense that the combined effect is greater than the effect of the dimensions considered independently. The multiple stepwise regression correlation technique allows the researcher to determine which perceptual dimensions are more potent or antecedent to other dimensions in the determination of relative predictive strength. In other words, the relationship of perceptual variables to a criterion variable may be a function of the particular combination of perceptual dimensions selected for research.

Previous studies in perceptual psychology have suggested that there might be a single holistic factor which is common to all perceptual dimensions. The present study indicates that the interaction among perceptual dimensions is unitary rather than discrete. There is also the suggestion of a multiplier effect among perceptual dimensions, the result being that there may be a relatively small number of truly significant perceptual factors which distinguish effective from ineffective helpers. In

other words, perceptual factors may vary in terms of fundamental importance in the ability to predict effective and ineffective helpers. The task for perceptual research, then, is to determine which combination of perceptual factors yields the highest predictive strength with criterion variables.

Pearson correlation coefficients suggest that the instructor's perception of the helping relationship as one of freeing students to explore and discover their own best ways is significantly related to student ratings of teacher effectiveness. The correlation between perception of the helping relationship as freeing was at the .05 level of significance with the PIPI, and the .01 level of significance with the TRS.

Pearson correlation coefficients also suggest that instructors who see themselves as generally liked, wanted, successful, and able are seen as effective instructors by their students. The correlation between perceptions of self as adequate was at the .05 level of significance with the PIPI, and the .01 level of significance with the TRS.

In addition, Pearson correlation coefficients between perceptual data and TRS student ratings suggest that instructor's who are concerned with how things seem to others and see others as having dignity and respect are judged as effective instructors by their students. Both of these correlations were significant at the .05 level.

Implications

The results of this study suggest a number of implications for effective teaching at the junior college level. The author sees two prin-

cipal areas of interest which he will discuss in this section: (1) effective teaching at the junior college level, and (2) training and selection of junior college instructors.

Effective Teaching at the Junior College Level

Previous research in perceptual psychology reported a positive and significant relationship between the perceptual organization of elementary and secondary teachers, counselors, Episcopal priests, and various criteria of judged effectiveness. This research found a similar relationship held for junior college instructors.

It was found in this study that effective junior college instructors viewed the helping relationship as one of freeing students to be more open to their experiences. These instructors saw their task as essentially one of releasing, facilitating, and assisting students to explore and discover the personal meaning of information. This finding provides support for the belief that teaching is not simply the imparting of information. The junior college instructor must know his subject but knowledge alone does not guarantee success. The provision of information is important but what information and how it is used is a highly individual matter. According to the perceptual view of learning, if information is to have a significant impact on changing behavior, then the student must perceive the relationship of the subject matter to his own immediate needs. The findings of this study suggest that students favor a learning environment which is student-centered rather than teacher-centered.

The junior college instructor plays a number of significant roles. First, he provides the background of liberal education for transfer students who subsequently enroll in specialized upper-division courses. Second, he provides the increasingly demanded technical and vocational programs which are congruent with the needs of business and industry. And third, he provides courses for individuals who have no specific vocational outcome other than personal enrichment. In a single course, the junior college instructor could conceivably have representatives of all three groups. Thus, the junior college instructor must be resourceful enough and flexible enough to deal with vastly different abilities, needs, and interests. The traditional program of tests, grades, and required readings might stand in the way of exposing students to new facets of themselves and their environment. Especially significant would be the instructor's versatility in matching student needs with effective means of implementing these needs. For example, a low achieving student may be a "poor choser" if immediately placed in a free and open environment. What this suggests is that junior college instructors need to be aware of students as individuals, and in creating meaningful learning environments to utilize sources, references, and experiences which best suit the needs of the particular students in his class.

Another finding of this study was that effective junior college instructors viewed others as having the capacity necessary to deal with their own problems successfully. That is, they perceive others as basically able to make their own decisions and deal with their own crises ef-

fectively. There is inherent in this belief the contention that the student "can" and "is able." If the community junior college is to validate the philosophy of the open door college, then an important aspect of effective teaching would be the belief that the student has the capacity to learn. This would be especially applicable to low achieving students who may have had a long history of failure in the area of academic learning.

It was also found that instructors who saw themselves in essentially positive ways were judged as effective teachers. These instructors felt liked, wanted, successful, and able to confront the world with openness and acceptance. It has previously been discussed that professions such as teaching, counseling, nursing, and the ministry are all members of the helping profession. As Combs has pointed out, "Helping professions seem really to be expressions of a kind of basic good human interrelationship" (1969, p. 70). There is enough research in the psychological literature to suggest that liking and accepting others is predicated upon liking and accepting oneself. Combs, Avila, and Purkey have emphasized the significance of personal adequacy as a prerequisite for effectiveness in the helping professions. "It is only when persons feel fundamentally adequate that self can be transcended and attention given to the needs of others. People who feel inadequate cannot afford the time and effort required to assist others as long as they feel deprived themselves" (1971, p. 13). The task of effective teaching is thus dependent upon entering into some kind of relationship with others; a deprived self cannot make the commitment.

In discussing the goals and purposes of education, it is important to define the basic philosophy underlying these objectives. Combs, Avila, and Purkey have clearly delineated the underlying assumptions of the helping professions:

> Each of these modern developments in the helping profession is predicated upon the assumption that the human organism is predicable and,provided it has the proper conditions for freedom, can be counted on to move toward desirable ends.
>
> The role of the helper...is essentially one of administering to people. It does not seek to direct or control its subjects but to serve the organism and to create the conditions most likely to set it free. It is a matter of manipulating processes rather than people. It is a question of aiding, helping, facilitating, encouraging, and assisting rather than forcing, coercing, cajoling, bribing, or exhorting persons to do better things. It is a matter of working with the organism rather than against it, of seeing helper and helpee as teammates rather than antagonists (1971, p. 79).

In specific terms of "teaching" excellence at the junior college level, effective teaching then becomes a matter of working through the environment, in essence, providing the student with greater freedom to explore and discover his maximum potential. It is not so much a matter of specific methods or techniques that is suggested. Research has shown that students can learn under a variety of methods and from a wide variety of teacher personalities. In the end result a method is only as good as the person using it. What is important is "...the particular way in which the instructor is able to combine his knowledge and understanding with his

own unique ways of putting it into operation in such a fashion as to be helpful to others" (Combs, 1969, p. 11).

Training and Selection of Junior College Instructors

In its policy statement for community junior colleges, the Carnegie Commission (1970) suggested that the federal government take an active part in stimulating the expansion and improvement of graduate education programs for the preparation of junior college teachers. The Commission discouraged the recruitment of research oriented PhD's for teaching positions at the junior college level. Since the primary role of the junior college instructor is teaching and counseling, not publication or research, the research oriented scholar would be inappropriately trained for junior college teaching. In constructing a training program to meet the specific needs of the community junior college, the Commission recommended a four-year Doctor of Arts degree for those assuming administrative leadership roles, and a two-year Master's program for junior college teachers.

In selecting prospective candidates for a junior college teaching position, the major criterion for selection would be excellence in teaching. Combs (1965) made an interesting distinction between the purposes involved in producing a professional practitioner. First, the education of a scholar is essentially directed toward content; that is, acquisition and understanding of information. On the other hand, the education of a practitioner stresses the effective use of knowledge. For

the practitioner, application is the heart of the task. The responsibility for teacher-education programs is thus the development of professional workers who can be counted on to act upon knowledge as well as have it. Combs has said:

> Teacher education, like education generally, has done pretty well in two of its phases. It has been quite successful in gathering information and in making information available to students. We have done this by gathering information in our libraries and in the minds of brilliant teachers. We have learned also to make this information available to other people through lectures, demonstrations, and the whole new world of audio-visual techniques. We are experts at telling people what they need to know, and we measure the success of teaching by requiring students to tell it back to us. If they do this satisfactorily, we commend them for knowing and rest content that we have taught them well. Much of the educational practice never gets beyond this level of learning. But there is a third phase of the learning process essential for teacher education, with which we have not done so well. It is helping people to discover the personal meaning of information so that they behave differently as a result of teaching (1965, p. 27).

The results of this study report that five of the six perceptual dimensions demonstrate high predictive power when combined for both measures of student evaluation. The combination of these perceptual characteristics seems to indicate that students learn best when the instructor is sensitive to how things seem to students, sees others as worthy and able to make their own decisions, sees himself as liked and wanted, and sees the helping relationship as one of freeing students to explore and discover their own best ways.

With regard to these findings, teacher education for junior college instructors might be looked at as an equation involving two essential parts: one objective, the other subjective. The objective aspect is primarily concerned with acquisition and understanding of information. The subjective approach stresses the personal discovery of the meaning of this information from the position of the learner. Teaching is essentially a helping relationship and learning to use oneself is not a matter of learning more information but achieving greater facility for using what one already knows.

In particular, the author sees two aspects which would be instrumental to the success of the subjective part of the equation.

First, would be the participation by student teachers in small seminar groups in which the emphasis would be placed primarily on the exploration and exchange of ideas. "The purpose of the seminar would be to provide a group small enough for students to have adequate opportunities for discussion, and stable enough so that there would be ample opportunity for them to get to know each other" (Combs, 1965, p. 119). In addition to the facilitation and clarification of the personal meaning of ideas, the seminar groups would be empirical laboratories for self-awareness and sensitivity toward others. In the present study, both of these were judged as relevant variables for teacher effectiveness.

Second, would be a mandatory internship program which would provide valuable on-the-job experience in which the student teacher could try himself out in a practical laboratory. The internship would familiarize the student teacher with the unique aspects of teaching at the junior college level.

Future Research

Perceptual Inference as a Useful and Valid Instrument for Assessing Self-Concept and Perceptual Characteristics

Since the key to research in the area of perceptual psychology relies upon the inference technique as a valid and reliable tool for the investigation of human behavior, the author thought it appropriate to summarize some of the major issues involved in the measurement, reliability, and validity of perceptual ratings.

In addition to the findings of this study, past research by Gooding (1964), Usher (1966), Brown (1970), Vonk (1970), and Dellow (1971) has demonstrated that it is possible to reach a high level of agreement among raters regarding the nature of a subject's perceptual organization. Positive and significant correlations were found between perceptual dimensions and external criterion evaluations of effective teaching such as student ratings, ratings by supervisors, and ratings by principals. From these studies it would appear that effective teaching, whether it be at the elementary, secondary, or higher education

level, is in large part a function of the teacher's perceptions of himself, others, and the helping relationship. The perceptual method for determining the effectiveness of teachers has shown to be reliable and valid.

The perceptual rater's ability to move into the perceptual world of another individual and see the world from that individual's point of view determines the meaningfulness of utilizing perceptual psychology for research purposes. The accuracy of making perceptual inferences rests with the rater's ability to use himself as a reliable objective research tool. The author feels that the results of ten years of research in the area of perceptual psychology clearly demonstrate that it is possible to evaluate behavior from an internal point of view.

The research thus far in perceptual psychology has been confined to relatively small samples. The fact that perceptual psychology has made important contributions to the selection and evaluation of effective helpers suggests the need to implement perceptual research on a wider scale. If this implementation is to occur, measuring techniques need to be refined to deal with larger samples of subjects. Several areas need to be examined in greater length.

Brown (1970) pointed out the sheer labor involved in rating subject protocols. The careful procedure of reading protocols several times in order to avoid possible halo effects is time consuming. To deal with larger samples, instruments need to be developed that will yield

equally valid and reliable data but at a less cost in time. This necessitates acquiring brief reliable samples which are rich in perceptual meaning.

Most of the research in perceptual psychology has introduced the possibility of one global perceptual dimension which embodies the total meaning of perceptual organization. If the objective of perceptual research is to acquire brief reliable samples of subject protocols, then a study should be undertaken to identify one or two highly predictive perceptual dimensions. One possibility would be to initiate a study which would carefully and systematically collate all the dimensions previously used in perceptual research and subject them to factor analysis.

One might also analyze the data to see if there are certain perceptual variables which operate as significant predictors for elementary teachers, but not for secondary or college level students, and vice versa. An interesting proposal for a study would be to take a sample of teachers at the elementary, secondary, and college level and use a number of instruments to infer perceptual organization. Inferences could be made from TAT pictures, Human Relations Incidents, observations, and interviews. A comparison of the data might determine if different instruments yield similar aspects of perceptual organization when identical perceptual dimensions are used. In this way, the subject's perceptual score could be examined across instruments.

Possible Sources of Data Contamination

Dellow (1971) raised the question of the possible effect of transient emotional states on subject's writing protocols and rater's scoring protocols. One procedure for reducing the possible dominance of a single emotional state would be to administer projective instruments on several different occasions. However, perceptual psychology states that central beliefs tend to be consistent and resistant to change. Thus, if behavior is a function of the individual's central beliefs, and if raters are accurately inferring the nature of the individual's stable and consistent perceptions, then transient emotional states do not significantly affect or distort the subject's written protocols. The author also feels that there is little contamination of the data due to rater emotional transience. Each protocol is read a number of times, and the raters are encouraged to read only five protocols per hour to reduce rater fatigue.

A more serious contamination might occur during the training session. The purpose of the training session is to discuss in detail the techniques for making perceptual inferences. The training sessions provide the raters with an excellent opportunity to verbalize inferences about training protocols. The formal research is not begun until the raters reach agreement within a two-point limit (utilizing a seven-point scale) for a minimum of 75 percent of the perceptual items. Contamination of the data could occur at this point if the inter-rater reliability is the result of the raters trying to remain "on target" with a consensus

agreement. A study which could yield interesting data regarding inter-rater reliability would involve the simultaneous training of two rating teams under similar conditions. After completion of the training, each team would be asked to evaluate identical protocols. A comparison of the data in terms of significant mean differences between the two rating teams could determine if spurious inter-rater reliability is a research consideration.

A second proposed study would ask a perceptual rating team to evaluate protocols from two diverse groups. For example, one set of protocols could be obtained from a group of subjects presently undergoing psychiatric treatment, and a second set of protocols obtained from a sample of subjects previously judged as exhibiting a high degree of adequacy, concern for others, and openness to experience. Accuracy of perceptual ratings should produce two groups with significant mean differences on a seven-point scale.

The author would suggest that perceptual research is in a position to make a significant contribution to the helping professions, especially in the areas of selecting candidates in terms of predicted effectiveness and assisting in-service personnel to gain a better understanding of themselves and those with whom they interact.

APPENDICES

APPENDIX A

ST. JOHNS RIVER JUNIOR COLLEGE

March, 1970

MEMO TO: All Faculty

FROM: Dean McLendon

As you may or may not know, Mr. Charles V.L. Dedrick has worked two years as an instructor in psychology at St. Johns River Junior College and is presently employed as an interim instructor at the University of Florida. Sometime ago Mr. Dedrick suggested that he would like to write a dissertation on the characteristics of teachers at the junior college level. At the orientation meeting of the faculty in August, 1969, Mr. Dedrick gave a brief presentation of his proposal and obtained a list of faculty members who agreed at that time to participate in the research.

I am writing this memo asking you if you will be good enough to cooperate with Mr. Dedrick in this project which may prove of great value in understanding important characteristics involved in teaching.

APPENDIX B

INTRODUCTORY LETTER

Gainesville, Florida

Dear

You have probably already received a letter from Dean McLendon asking your help in providing data for my doctoral dissertation at the University of Florida. The study concerns itself with the characteristics of instructors at the junior college level.

The study consists of two parts. First, you will be asked to respond to two different instruments. In a group setting, you will be shown five pictures and then asked to write stories about each of the pictures. The total time involved should not exceed an hour and a half. Also in your own time you will be asked to write three human relations incidents within a two week period.

The second part of the study will include student evaluation instruments to be administered during class period. The administration of these instruments should not exceed 30 minutes.

Needless to say, all of your responses will be kept confidential and anonymous.

Your cooperation in making this study possible would be greatly appreciated. A pre-addressed card for your reply is enclosed. I would appreciate your reply as soon as possible so that I might begin making appointments for the group written responses.

Thank you for your help and cooperation.

Sincerely,

Charles V.L. Dedrick

APPENDIX C

INSTRUCTION LETTER

Gainesville, Florida

Dear

I appreciate your willingness to participate in this study. I believe the data will provide some valuable insights about teaching at the junior college level.

As I mentioned in the introductory letter, it is necessary to meet in a group setting for the administration of the five pictures. I have indicated several time periods on the attached sheet. Would you please check one of the boxes and return this sheet via the campus mail to Dean McLendon's secretary.

At the time of the group administration of the five pictures, I will provide you with three human relations incident report sheets, an instruction sheet, and a coded envelope to be returned to Dean McLendon's secretary.

I will also be sending you, through the campus mail, the student evaluation instruments. These are sealed in two coded manila envelopes with the section indicated in which the instruments are to be administered. Would you please arrange for the administration of the instruments during a convenient time during the last two weeks of the semester. Since the administration of the student evaluation instruments is to be handled completely by the students, would you please select a mature student in each section to be responsible for the student evaluations. An instruction sheet for the student who is to administer the instruments is contained within each sealed envelope.

Please accept my warmest thanks for your support and cooperation.

Sincerely,

Charles V.L. Dedrick

APPENDIX D

HUMAN RELATIONS INCIDENT

I would like you to think of a significant past event which involved your self and one or more other persons. That is, from a human relations standpoint, this event had special meaning for you. In writing about this event I would ask you to follow the following format:

First, describe the situation as it occurred at that time.

Second, what did you do in that particular situation?

Third, how did you feel about the situation at the time you were experiencing it?

Fourth, how do you feel about the situation now?

It would be helpful if you describe the thoughts and feelings of yourself and the other individuals involved rather than objectively describe the situation. Use as much paper as you wish.

APPENDIX E

ADMINISTRATION OF TAT PICTURE STORIES

I am going to show you five pictures on a screen one at a time. Each picture is a scene involving some people. I am going to ask you to write a story about each scene using the following procedure.

First, I would like you to describe what is occurring at present in the scene. In other words, make up a story which starts with what is presently going on in the picture.

Second, I would like you to tell about the events which may have led up to the present scene.

Third, I would like you to conclude the story by telling what the outcome might be; in other words, how does the story end.

In all three segments of the story it would be helpful if you use your imagination and describe the thoughts and feelings of the individuals involved rather than an objective description of the scenes.

Most people can make a story about each of these pictures in about fifteen minutes so in each case I will ask you to stop writing at the end of fifteen minutes. Do not worry if you are not finished in time.

APPENDIX F

PERCEPTUAL SCORE SHEET

Rater # _____ Code # _____

Date _____

Obs: HRI TAT

A. THE TEACHER'S GENERAL FRAME OF REFERENCE

1. Internal - External

The subject is sensitive to and concerned with how things seem to others with whom he interacts and uses this as a basis for his own behavior.

The subject is insensitive to and unconcerned with how things seem to others with whom he interacts and uses this as a basis for his own behavior.

Internal 1 2 3 4 5 6 7 External _____

PERCEPTUAL SCORE SHEET

Rater # _____ Code # _____

Date _____

Obs: HRI TAT

B. THE TEACHER'S PERCEPTIONS OF PEOPLE AND THEIR BEHAVIOR

1. Able - Unable

The subject sees others as having the capacities necessary to deal with their own problems successfully. He perceives others as basically able to make their own decisions and deal with their own crises effectively.

The subject sees others as being essentially unable to meet the crises in their lives and make their own decisions. His perceptions of the abilities of others are doubtful in nature.

Able 1 2 3 4 5 6 7 Unable _____

PERCEPTUAL SCORE SHEET

Rater # _____ Code # _____

Date _____

Obs: HRI TAT

B. THE TEACHER'S PERCEPTIONS OF PEOPLE AND THEIR BEHAVIOR

2. Worthy - Unworthy

The subject sees other people as possessing a dignity and an integrity which must be respected. He perceives others as essentially worthy, important people.

The subject sees other people as being unimportant, lacking in integrity, and whose dignity may be readily violated. He perceives others doubtfully in terms of their worth and value as persons.

Worthy 1 2 3 4 5 6 7 Unworthy_____

PERCEPTUAL SCORE SHEET

Rater # _____ Code # _____

Date _____

Obs: HRI TAT

C. THE TEACHER'S PERCEPTIONS OF HIMSELF

1. With people - Apart from people

The subject sees himself as a part of mankind, as identified with people and with groups. He perceives himself as deeply and meaningfully related to diverse persons and groups.

The subject sees himself as apart, removed, withdrawn or alienated from other people. He perceives himself as not deeply identified with diverse groups or persons.

With people 1 2 3 4 5 6 7 Apart from people____

PERCEPTUAL SCORE SHEET

Rater # _____ Code # _____

Date _____

Obs: HRI TAT

C. THE TEACHER'S PERCEPTIONS OF HIMSELF

2. Adequate - Inadequate

The subject sees himself in essentially positive ways. He sees himself as generally liked, wanted, successful, and able. He is able to confront the world with openness and acceptance.

The subject sees himself in essentially negative ways. He sees himself as generally unliked, unwanted, unsuccessful, and unable. He is not able to confront the world with openness and acceptance.

Adequate 1 2 3 4 5 6 7 Inadequate _____

PERCEPTUAL SCORE SHEET

Rater # _____ Code # _____

Date _____

Obs: HRI TAT

D. THE TEACHER'S PERCEPTIONS OF THE HELPING RELATIONSHIP

1. Freeing - Controlling

The subject perceives the purpose of the helping relationship as one of freeing students to be more open to their experiences. He sees the task as essentially one of releasing, facilitating, assisting, and encouraging behavior. He believes that people should be free to explore and discover their own best ways.

The subject perceives the purpose of the helping relationship as one of controlling and directing people in selected, pre-conceived experiences. He sees the task as essentially one of manipulating behavior. He believes that people must be coerced and inhibited or rewarded and appeased in order to "shape" appropriate responses.

Freeing 1 2 3 4 5 6 7 Controlling _____

APPENDIX G

INSTRUCTIONS FOR ADMINISTRATION OF
STUDENT EVALUATION FORM

The class section and teacher code number are included on the outside of the manila envelope. Please follow the procedure outlined below:

1. Distribute student evaluation forms to all students in class.

2. Review with the students each of the following pages

   a. Page 1: Introduction and Directions for Student Evaluation

   b. Page 2: Each student is to briefly write the characteristics of the very best and the very worst teacher he has ever had

   c. Page 3: Each student is to circle the number on the ladder of the Teacher Rating Scale which best represents the instructor being evaluated. The best teacher would be number 11 and the worst teacher would be number 1

   d. Page 4: Each student should read carefully the directions provided for the Purdue Instructor Performance Indicator. Remind the students that the rating scale consists of twelve groups or blocks containing four statements each. From each group of four statements the student is to choose two statements that best apply to the instructor being rated. Indicate the two statements chosen from each group or block by filling in the pairs of vertical lines to the right of each group.

3. Collect all the instruments when the students are finished with their evaluations.

4. Reseal the evaluations in the manila envelope.

5. Return the envelope immediately to Dean McLendon's office.

6. Thanks for your help.

APPENDIX H

INTRODUCTION AND DIRECTIONS FOR STUDENT EVALUATION

The purpose of this research is to find out the characteristics of good and poor teachers from the student's point of view. You can help us in our investigation by responding to the following three evaluations of teacher effectiveness.

First, we are asking you to list the qualities and characteristics of the best and worst teacher you have ever had.

Second, when you have completed the written descriptions, turn to the Teacher Rating Scale and proceed to rate the instructor presently being evaluated according to the directions provided.

Third, proceed to the Purdue Instructor Performance Indicator and read carefully the directions and examples provided. Then proceed to rate the instructor presently being evaluated.

It is not necessary for you to put your name on any of these evaluations.

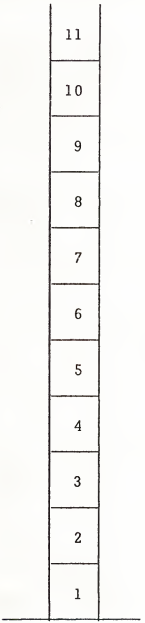
APPENDIX I

We are attempting to find out the characteristics of good and poor teachers from the student's point of view. You can help us in our investigation by responding to the following two questions.

First, think of the very best teacher you have ever had and in your own words, briefly list the qualities and characteristics of this teacher.

Second, think of the very worst teacher you have ever had and in your own words, briefly list the qualities and characteristics of this teacher.

TEACHER RATING SCALE



Please circle the number that best represents the instructor presently being evaluated

APPENDIX J

ame of Instructor

ourse Date

THE PURDUE INSTRUCTOR PERFORMANCE INDICATOR

J. H. SNEDEKER, Ball State Teachers College and H. H. REMMERS, Purdue University

FORM A

rections:

This rating scale consists of twelve groups or blocks containing four statements each.

The statements are descriptive of instructors and their teaching behavior or activities.

From each group or block of four statements you are to CHOOSE TWO statements that best describe or apply to the instructor being rated.

Indicate the two statements chosen from each group or block by filling in the pairs of vertical lines to the right of each group.

Sample:

		A	B	C	D
1A	Sincere				
1B	Speaks Well				
1C	Easy to Get Along With				
1D	Is Very Diligent				

In this block the answers indicate that we decided that the two statements—"Speaks Well" and "Is Very Diligent" were most applicable to or descriptive of the instructor we were rating.

The success of your rating depends on very careful consideration of each statement and then deciding which two in the block are most applicable to or descriptive of the instructor you are rating.

Be sure you use the electrographic pencil.

Check to see that you have chosen two statements from each block.

		A	B	C	D
1A	Shows Personal Interest in Student's Work				
1B	Likes and Understands Students				
1C	Doesn't Make Fun of Student's Response to Questions				
1D	Has Help Sessions				
2A	Is Interested in Subject Matter He (She) Teaches				
2B	Connects Lectures with Textbook Used				
2C	Willing to Help Those Slow to Learn				
2D	Uses a Variety of Teaching Techniques				
3A	Neat and Clean in Appearance				
3B	Good Fellowship Exists Between Him (Her) and Student				
3C	Has Confidence in Himself (Herself)				
3D	Tries to be Fair and has Character and Integrity				
4A	Good Use and Command of the English Language				
4B	Knows His (Her) Subject				
4C	Clear and Pleasant Voice				
4D	Tries to Find Loopholes in His (Her) Teaching and Correct Them				

		A	B	C	D
5A	Keeps Class Attention				
5B	Explains Method of Grading				
5C	Keeps Accurate Record of Grades				
5D	Realizes the Complications and Conflicts Met by Students				
6A	Keeps Classroom Atmosphere Rather Informal				
6B	Has a Sense of Humor				
6C	Good Posture				
6D	Grades Based on Work Done Not Personal Feeling				
7A	Makes Assignments at the Beginning of the Course				
7B	Gives Tests That Are Not Meant to be Tricky				
7C	Presents Materials Interestingly				
7D	Encourages Students by Helpful Advice or Praise on Tests				
8A	Talks Slowly Enough for Note Taking				
8B	Lets Students Ask Questions in Class				
8C	Treats Students as Grown Ups				
8D	Makes You Earn Grades No Handouts				
9A	Is Loyal to the School and Other Faculty Members				
9B	Writes Difficult Words on Blackboard and Explains Them				
9C	Doesn't Give Same Lectures All the Time				
9D	Friendly Outside the Classroom				
10A	Applies Subject to Everyday Life				
10B	Sticks to Subject				
10C	Stimulates Students by Raising Interesting Questions for Discussion				
10D	Tutors a Student in His Lessons				
11A	Sticks to the Grade Given				
11B	Grades on a Curve				
11C	Puts Ideas Across Logically and Orderly				
11D	Keeps Class a Team, Neglects No Student				
12A	Sticks to the Institution's Grading System				
12B	Well Organized Course and Assignment Sheet				
12C	He (She) is a High Grader				
12D	Has Good Discipline				

APPENDIX K

TABLE 13

Means and Standard Deviations of
All Twelve Perceptual Dimensions

Variable			Mean	Standard Deviation
A-1	TAT	Internal-External	4.23	0.820
B-1	TAT	Able-Unable	4.18	0.776
B-2	TAT	Worthy-Unworthy	3.93	0.632
C-1	TAT	With People-Apart People	4.23	0.625
C-2	TAT	Adequate-Inadequate	4.05	0.631
D-1	TAT	Freeing-Controlling	4.35	0.625
A-1	HRI	Internal-External	4.68	0.905
B-1	HRI	Able-Unable	4.37	0.647
B-2	HRI	Worthy-Unworthy	3.37	0.721
C-1	HRI	With People-Apart People	9.98	0.784
C-2	HRI	Adequate-Inadequate	3.94	0.783
D-1	HRI	Freeing-Controlling	4.12	0.644

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BIOGRAPHICAL SKETCH

Charles Van Loan Dedrick was born on July 8, 1937, in Orange, New Jersey. He attended public schools in West Orange, New Jersey, and graduated from Brown University in 1959 with a Bachelor's degree in Psychology.

Mr. Dedrick was employed by Sears, Roebuck and Company from 1959 to 1963 where he was a management trainee, department manager, and customer service manager. From 1963 to 1964 Mr. Dedrick was a special education teacher at Glenridge Junior High School in Winter Park, Florida. He enrolled in Rollins College in 1964 and received the Masters of Arts in Teaching degree in August, 1966. In June, 1965 Mr. Dedrick entered the graduate program in educational psychology at the University of Florida and received the Master of Education degree in April, 1966. While enrolled in the graduate program at the University of Florida, he was a graduate research assistant and departmental graduate assistant. From 1967 to 1969 Mr. Dedrick was an instructor in psychology at St. Johns River Junior College in Palatka, Florida. From 1969 to 1971 he was an interim instructor in educational psychology at the University of Florida. Mr. Dedrick is presently employed as an assistant professor of education psychology at the University of Northern Iowa in Cedar Falls, Iowa.

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I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

Arthur W. Combs, Chairman
Professor of Education

I certify that I have read this study and that in my opinion it conforms to acceptable standards of scholarly presentation and is fully adequate, in scope and quality, as a dissertation for the degree of Doctor of Education.

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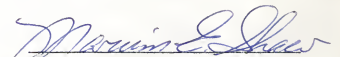

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This dissertation was submitted to the Dean of the College of Education and to the Graduate Council, and was accepted as partial fulfillment of the requirements for the degree of Doctor of Education.

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